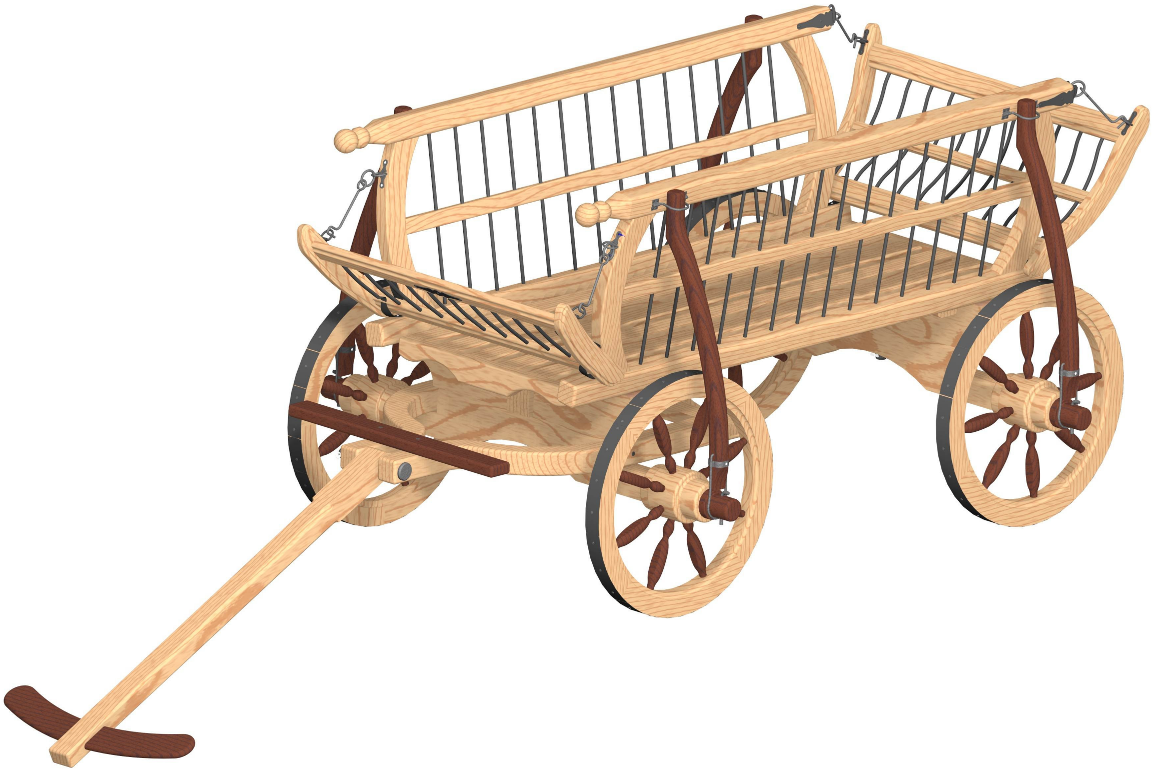
Carriage Theresia



Plans for the carriage in front of you, is a scale version of the wheeled vehicle, drawn by horses in some regions of Austria-Hungary in 18th and 19th century.

This version of carriage could be a beautiful decoration for your garden – especially if you put some flowerpots in bloom in it. Your garden will not only draw attention to all your guests and neighbors, but it will also be a great peaceful object to look at and rest your mind.

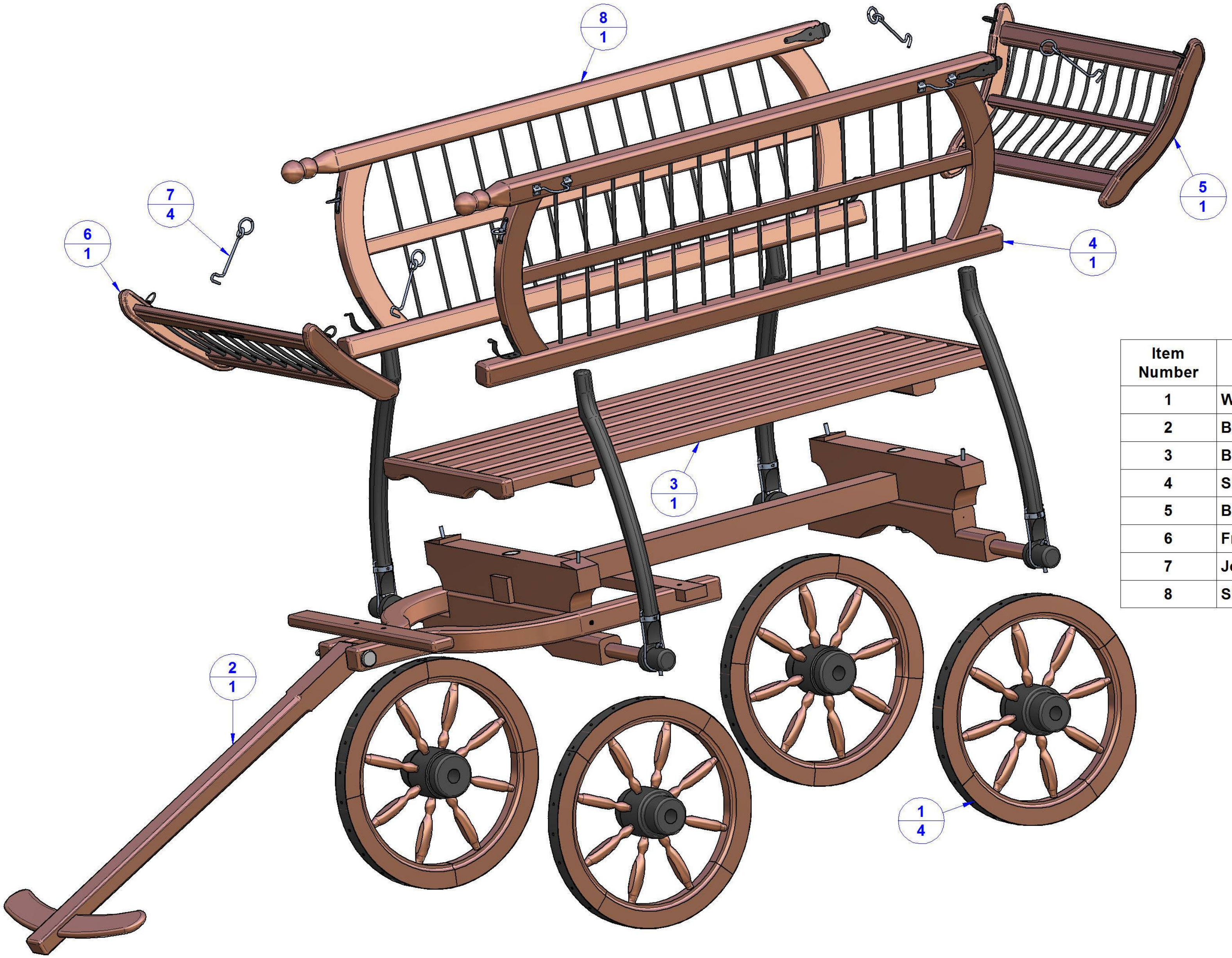
For making of carriage you can use various types of wood, but be careful to use only well dried wood. We recommend walnut, ash, beech, cherry, hickory, maple oak…

The assembly of carriage is classified into 8 subassemlies:

1. Wheel
2. Base
3. Bottom
4. Side
5. Back side
6. Front side
7. Joint
8. Side mirror

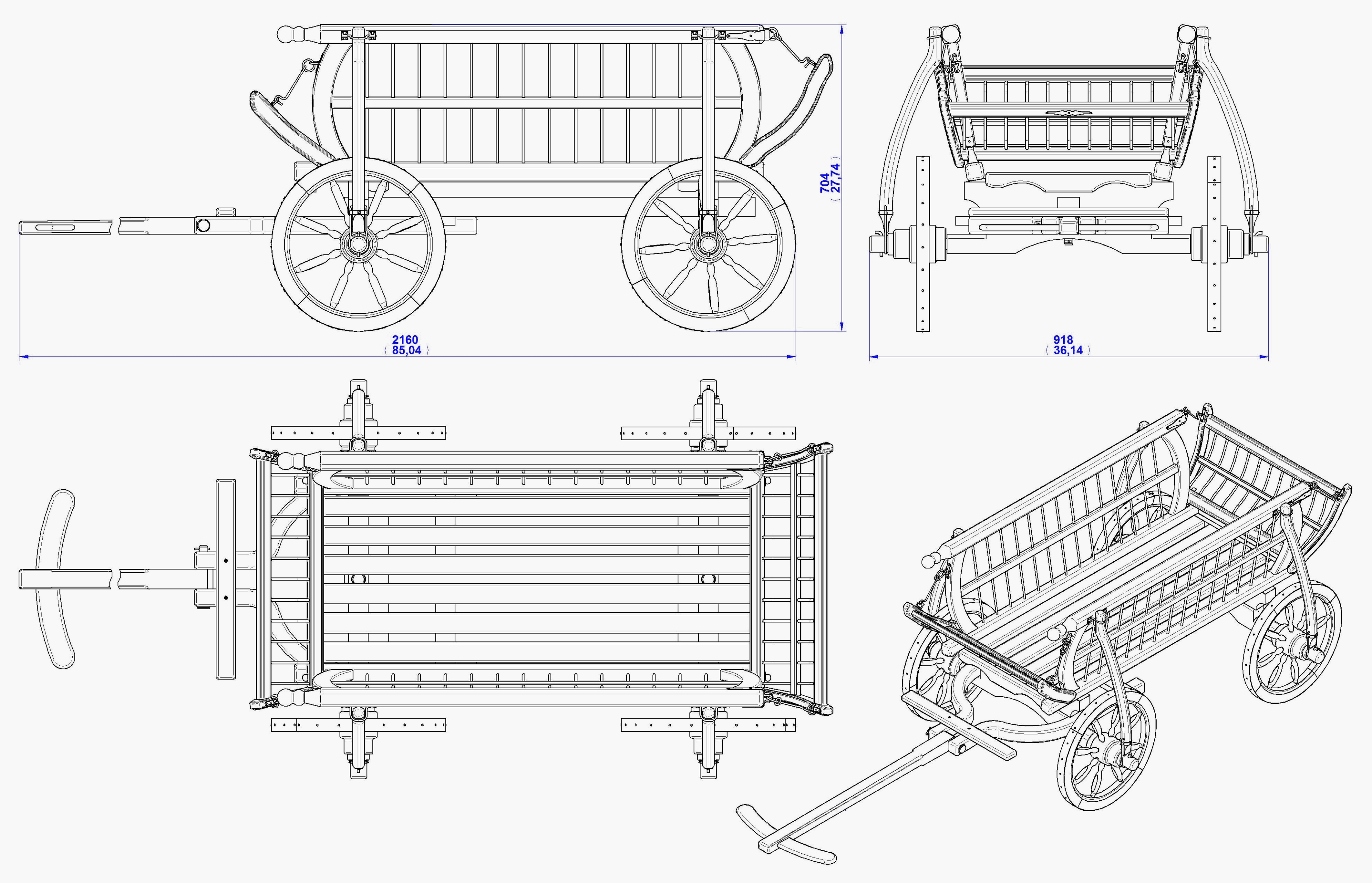
Make precise items by the measurements given on particular 2D drawings. The measurements are given in millimeters, and the measurements in inches are given in brakes (1 inch = 25, 4 mm).

Subassembly List

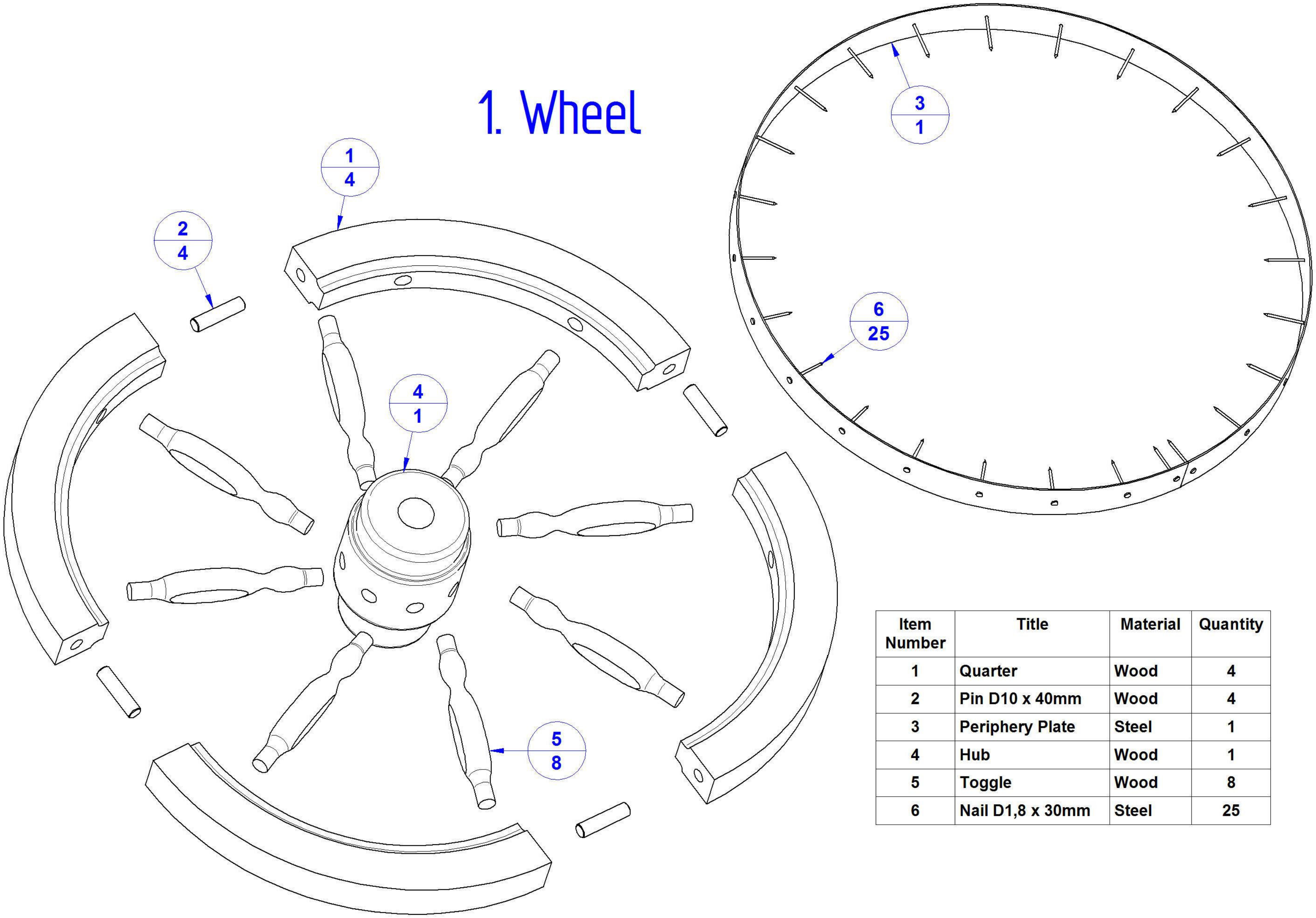


Item Number	Title	Quantity
1	Wheel	4
2	Base	1
3	Bottom	1
4	Side	1
5	Back Side	1
6	Front Side	1
7	Joint	4
8	Side Mirror	1

Main Assembly Drawing

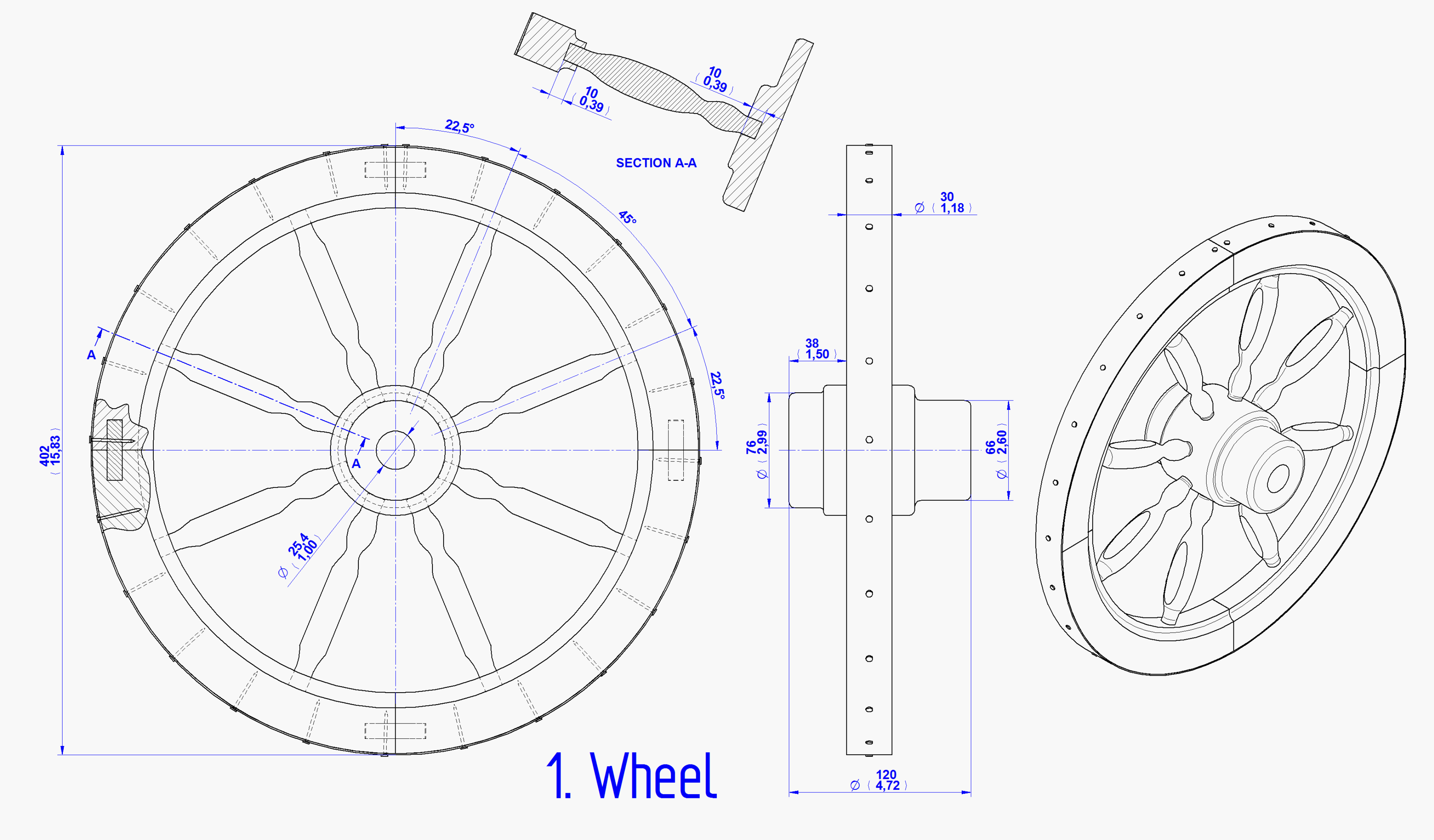

704
(27,74)
2160
(85,04)
918
(36,14)

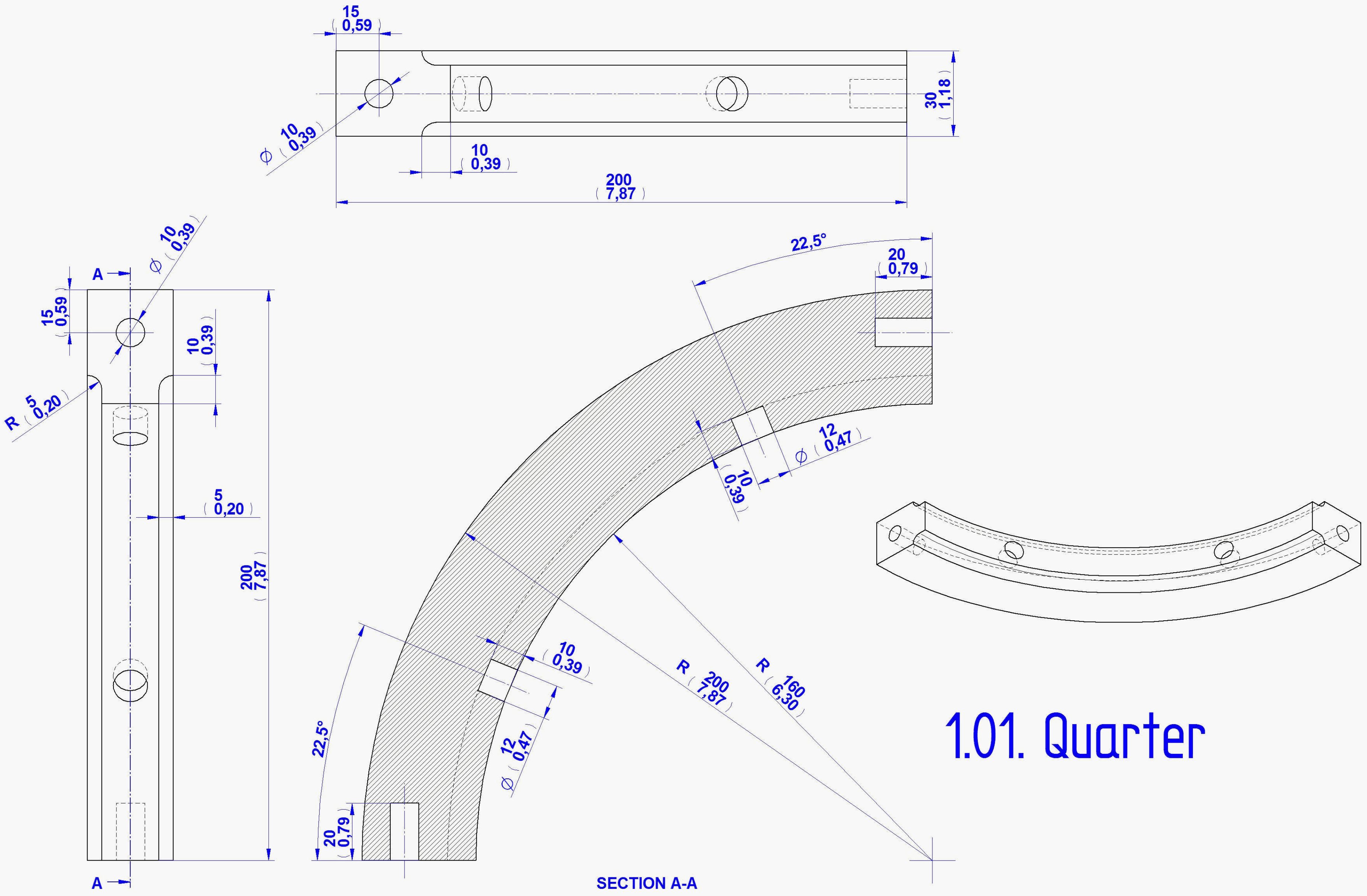
1. Wheel
Parts List



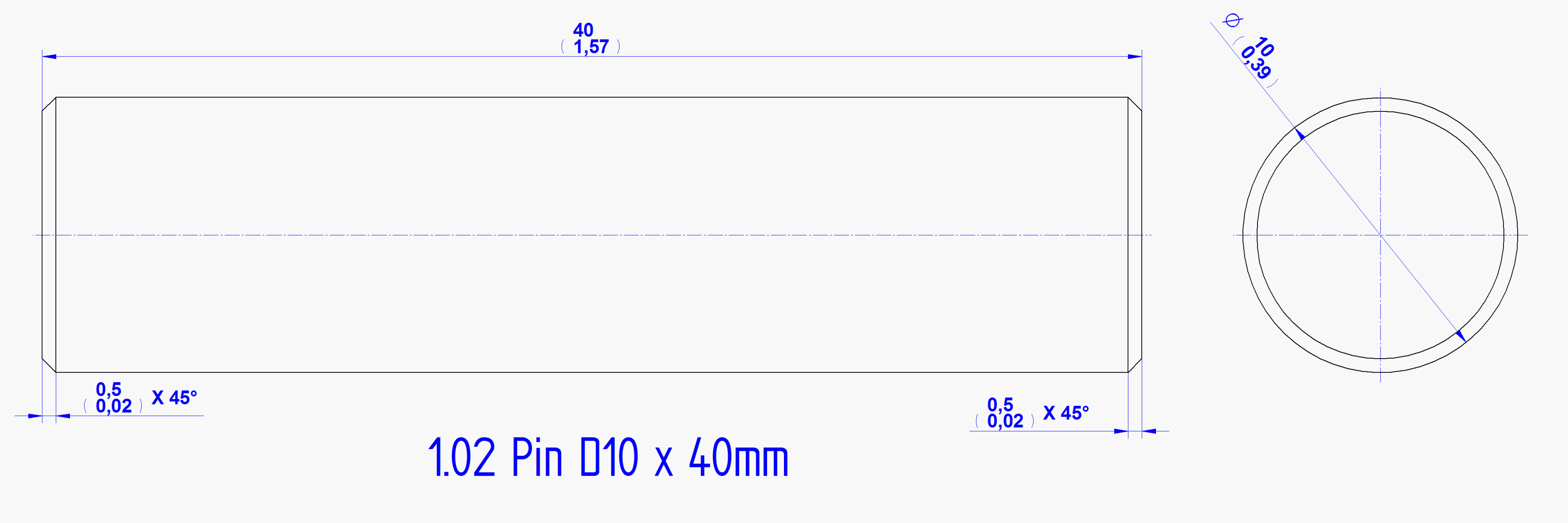
Item Number	Title	Material	Quantity
1	Quarter	Wood	4
2	Pin D10 x 40mm	Wood	4
3	Periphery Plate	Steel	1
4	Hub	Wood	1
5	Toggle	Wood	8
6	Nail D1,8 x 30mm	Steel	25

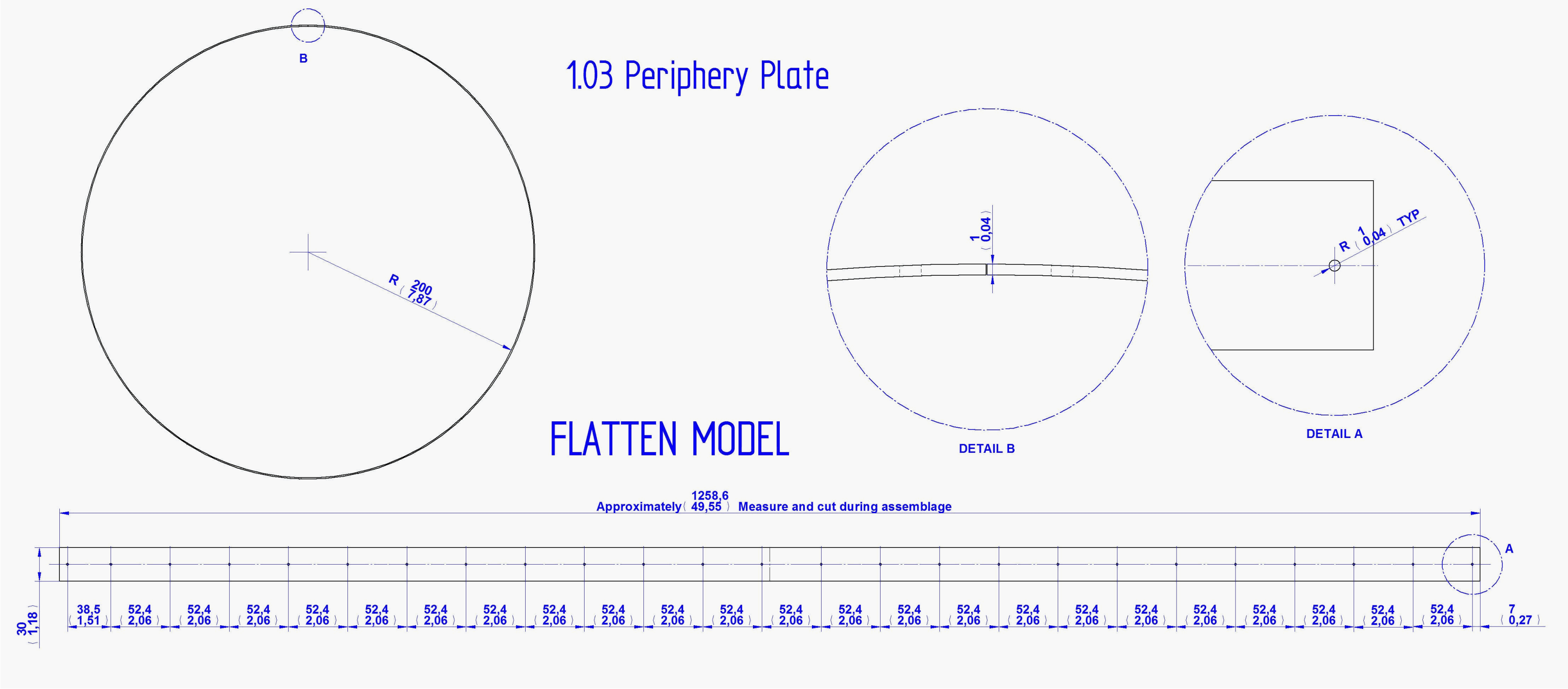
Wheel Suassembly Drawing


SECTION A-A
10 (0,39)
10 (0,39)
22,5°
45°
22,5°
402 (15,83)
A
A
⌀ 25,4 (1,00)
30 ⌀ (1,18)
38 (1,50)
76 ⌀ (2,99)
66 ⌀ (2,60)
120 ⌀ (4,72)
1. Wheel

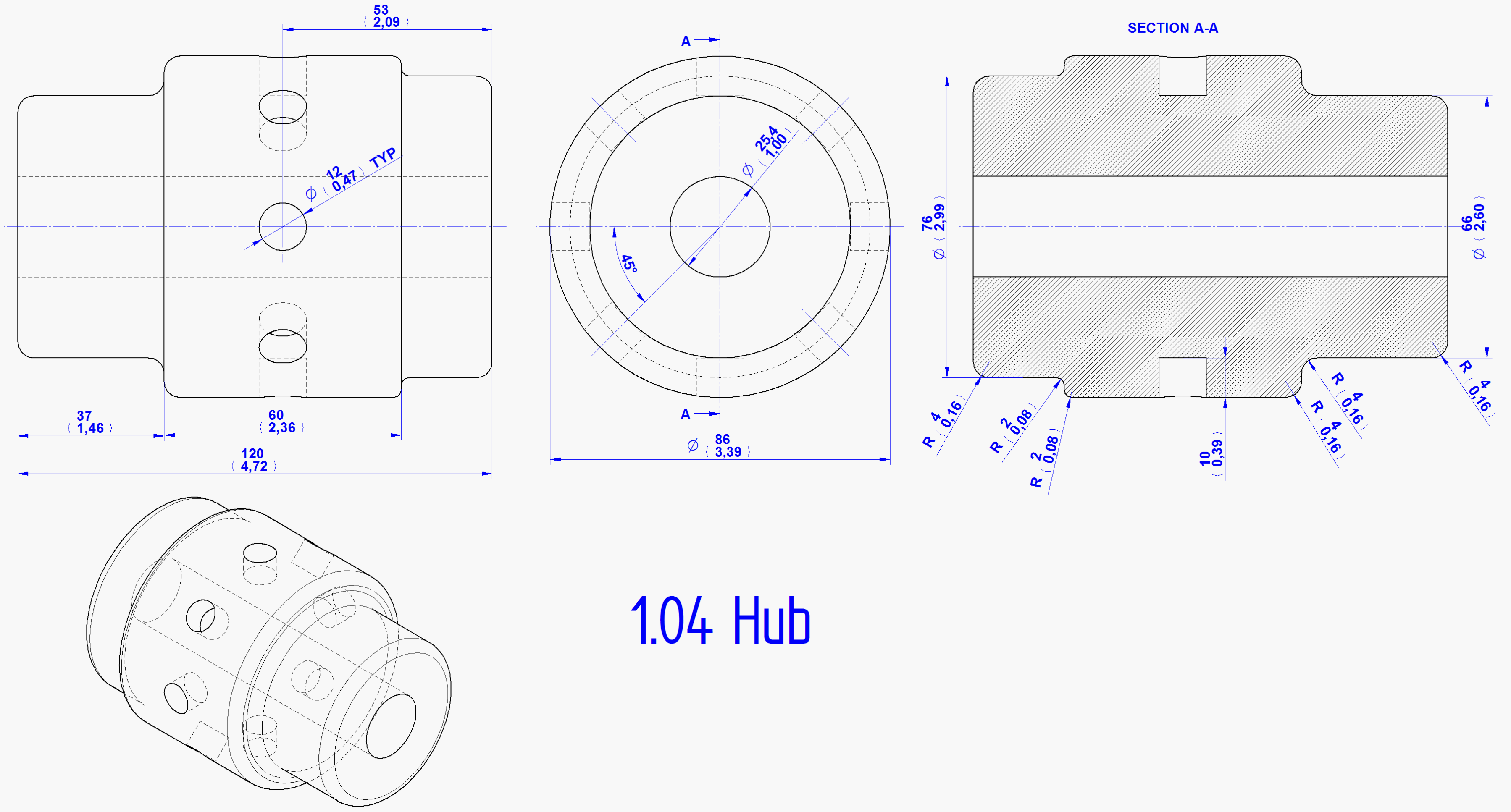

15
(0,59)
10
(0,39)
⌀
30
(1,18)
10
(0,39)
200
(7,87)
A
A
10
(0,39)
⌀
15
(0,59)
10
(0,39)
R 5
(0,20)
5
(0,20)
200
(7,87)
22,5°
20
(0,79)
12
(0,47)
⌀
10
(0,39)
10
(0,39)
R 200
(7,87)
R 160
(6,30)
22,5°
12
(0,47)
⌀
20
(0,79)
SECTION A-A

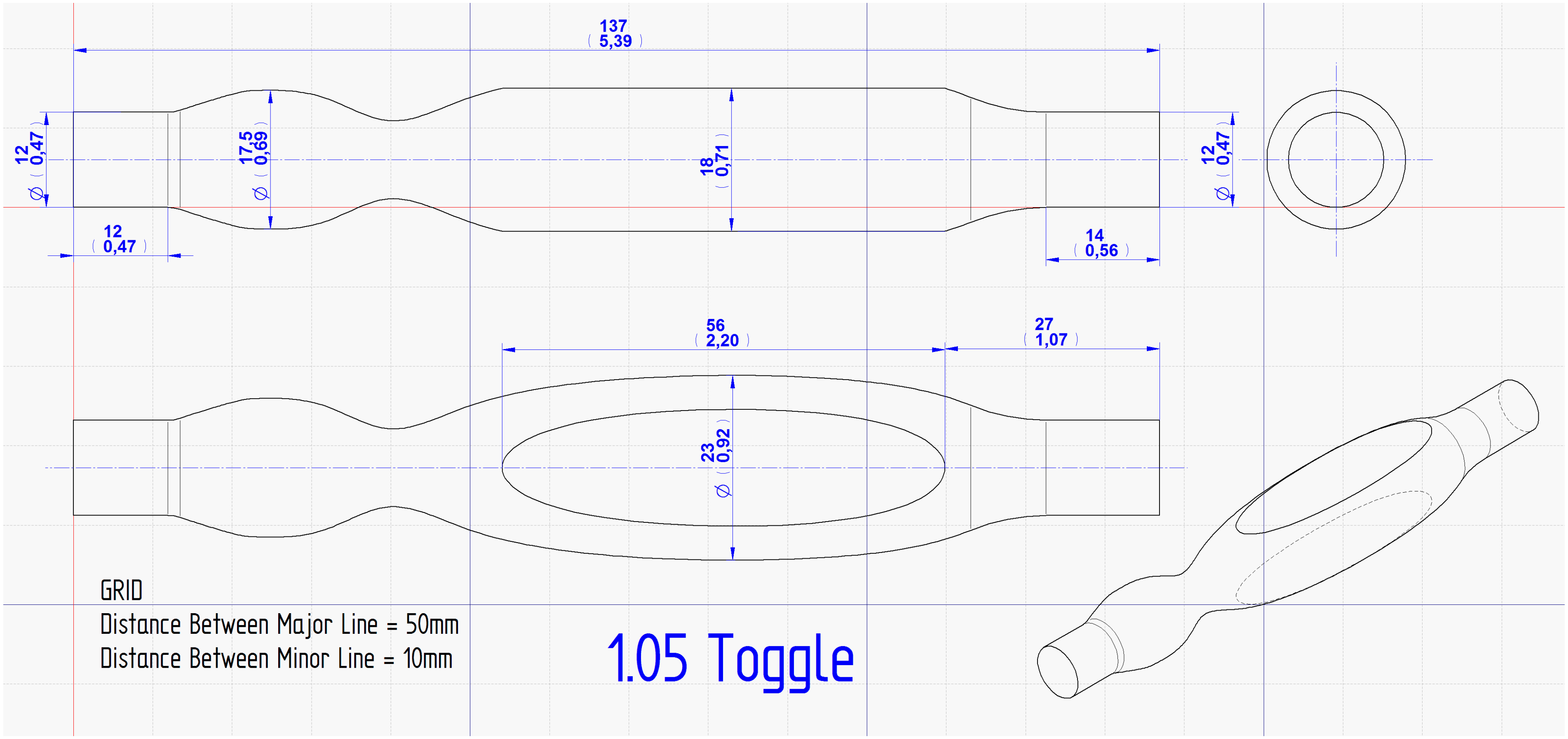
1.01. Quarter


40
(1,57)
Φ 10
(0,39)
0,5
(0,02) X 45°
0,5
(0,02) X 45°
1.02 Pin D10 x 40mm


B
1.03 Periphery Plate
R 200 (7,87)
1 (0,04)
R 1 (0,04) TYP
DETAIL B
DETAIL A
FLATTEN MODEL
Approximately 1258,6 (49,55) Measure and cut during assemblage
A
30 (1,18)
38,5 (1,51)
52,4 (2,06)
52,4 (2,06)
52,4 (2,06)
52,4 (2,06)
52,4 (2,06)
52,4 (2,06)
52,4 (2,06)
52,4 (2,06)
52,4 (2,06)
52,4 (2,06)
52,4 (2,06)
52,4 (2,06)
52,4 (2,06)
52,4 (2,06)
52,4 (2,06)
52,4 (2,06)
52,4 (2,06)
52,4 (2,06)
52,4 (2,06)
52,4 (2,06)
52,4 (2,06)
52,4 (2,06)
52,4 (2,06)
7 (0,27)

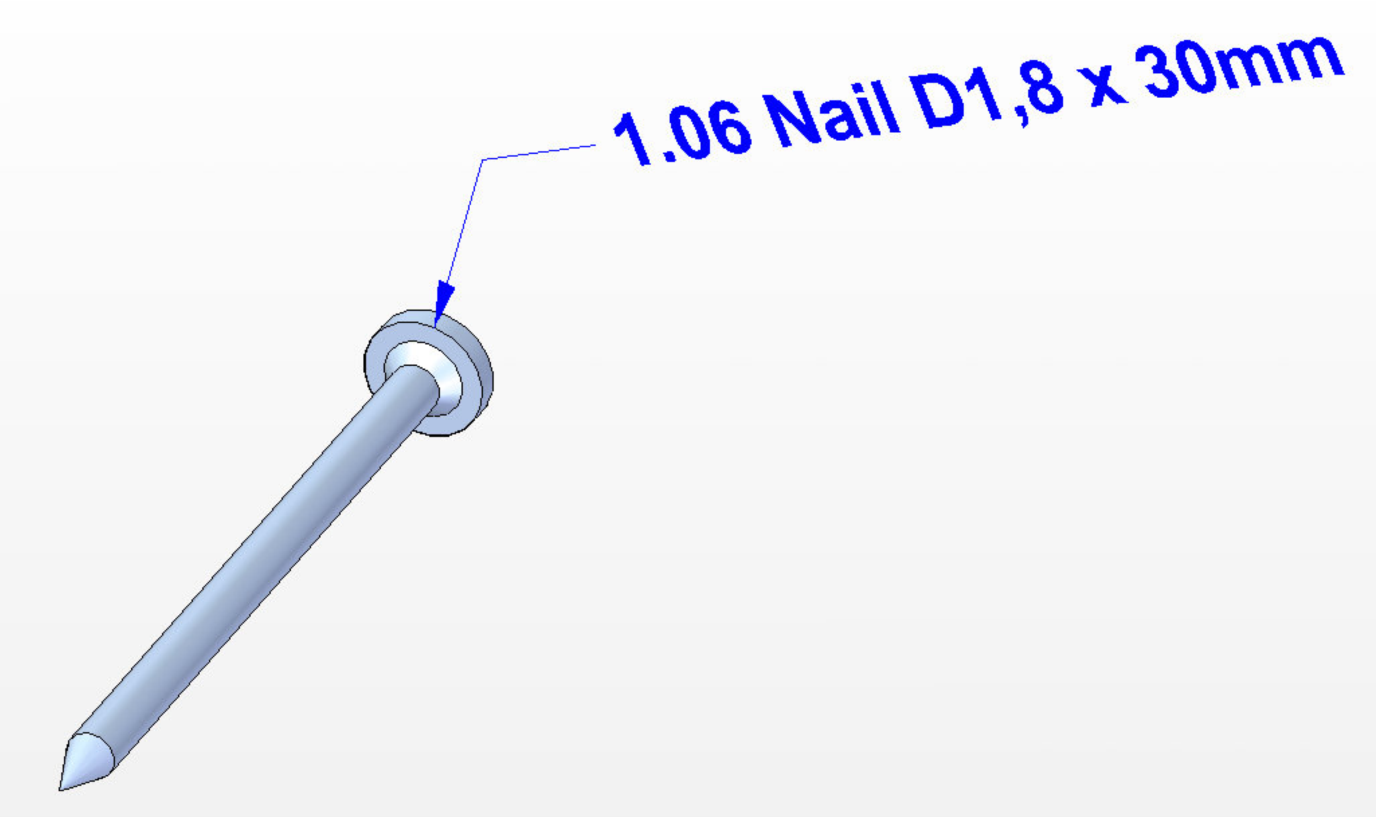
1.04 Hub


53
(2,09)
Ø 12 (0,47) TYP
37 (1,46)
60 (2,36)
120 (4,72)
A
A
Ø 25,4 (1,00)
45°
Ø 86 (3,39)
SECTION A-A
Ø 76 (2,99)
Ø 66 (2,60)
R 4 (0,16)
R 2 (0,08)
R 2 (0,08)
10 (0,39)
R 4 (0,16)
R 4 (0,16)
R 4 (0,16)


137
(5,39)
⌀ 12 (0,47)
⌀ 17,5 (0,69)
18 (0,71)
⌀ 12 (0,47)
12 (0,47)
14 (0,56)
56 (2,20)
27 (1,07)
⌀ 23 (0,92)

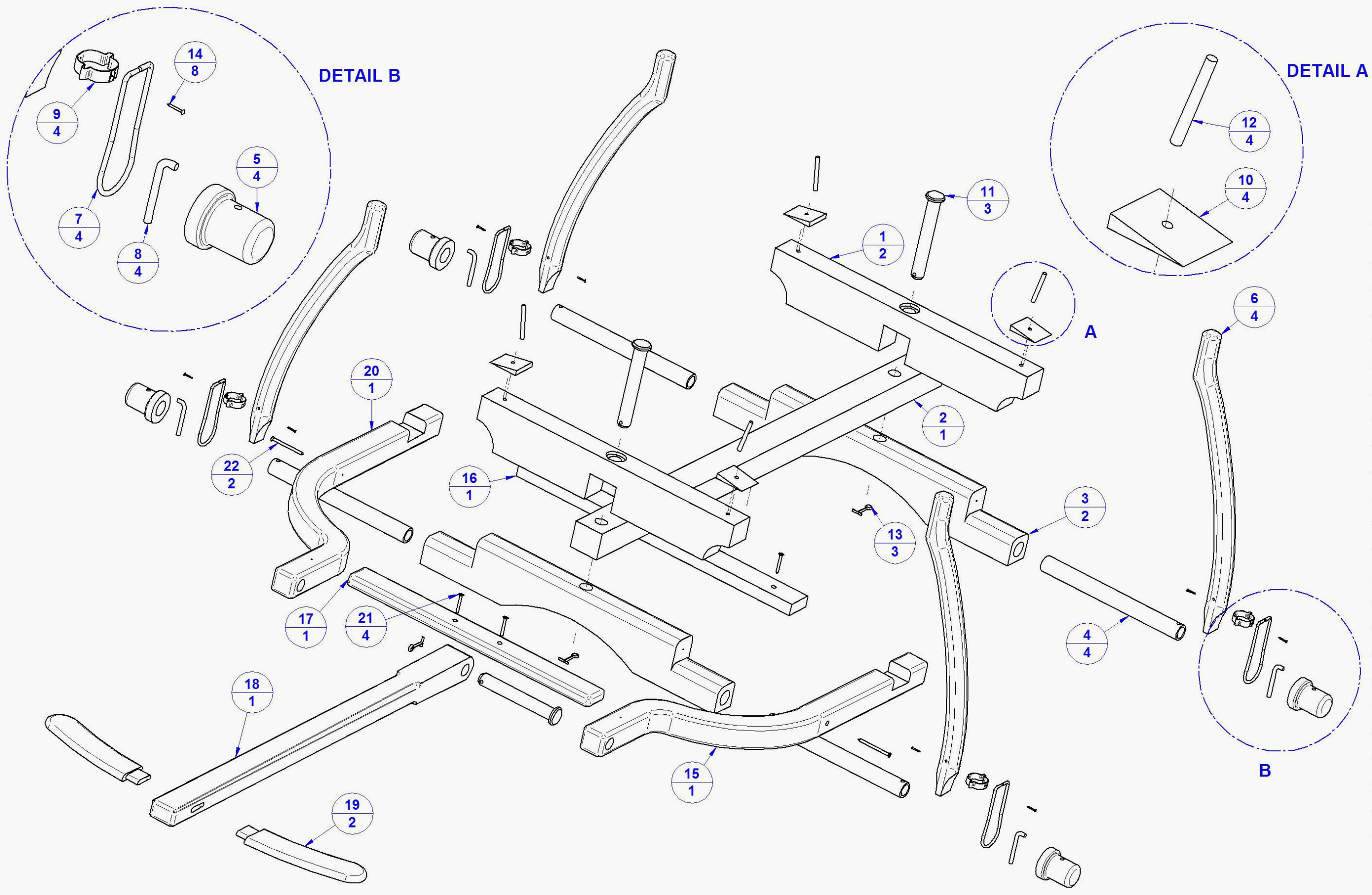
GRID
Distance Between Major Line = 50mm
Distance Between Minor Line = 10mm

1.05 Toggle


1.06 Nail D1,8 x 30mm

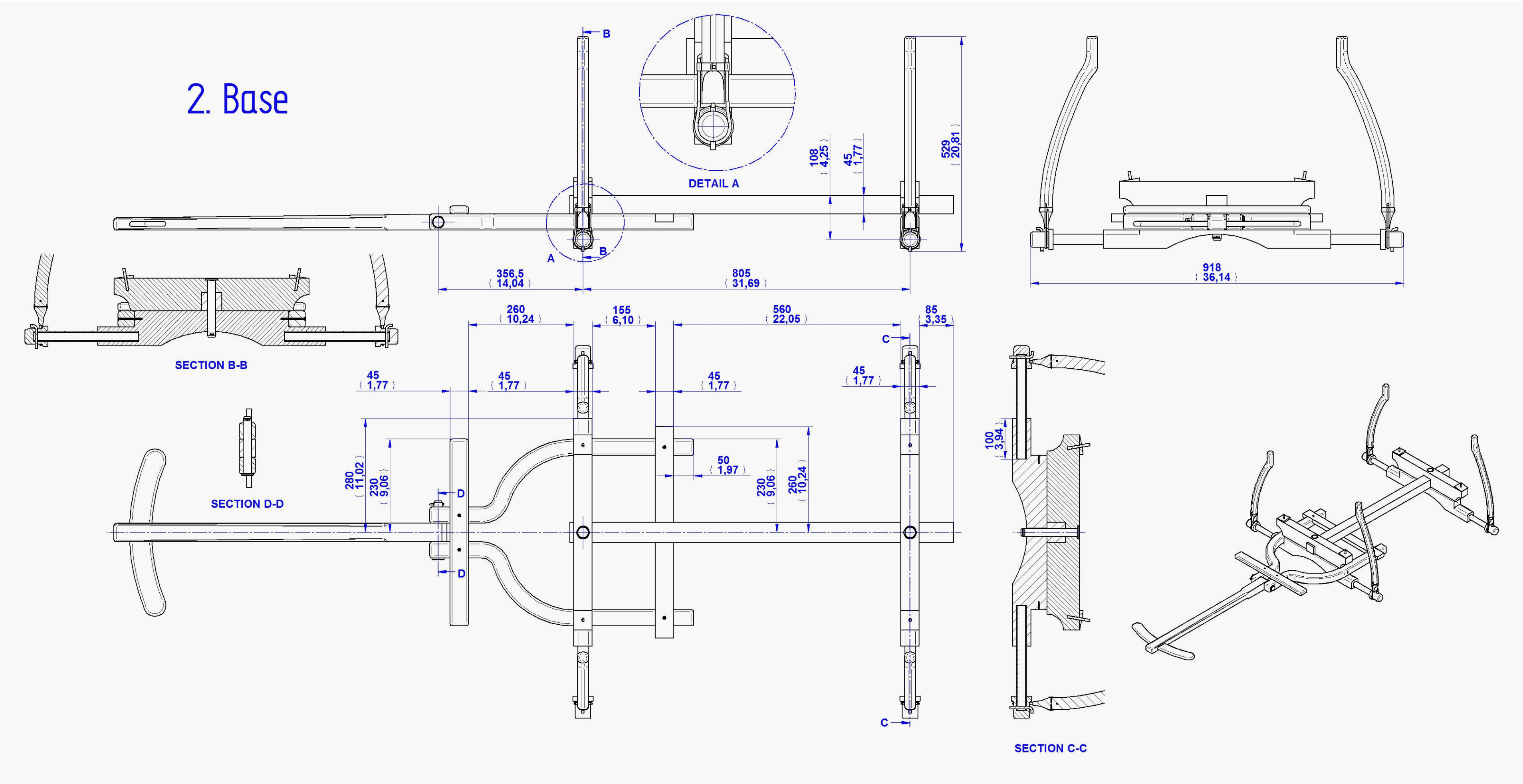
2. Base Subassembly

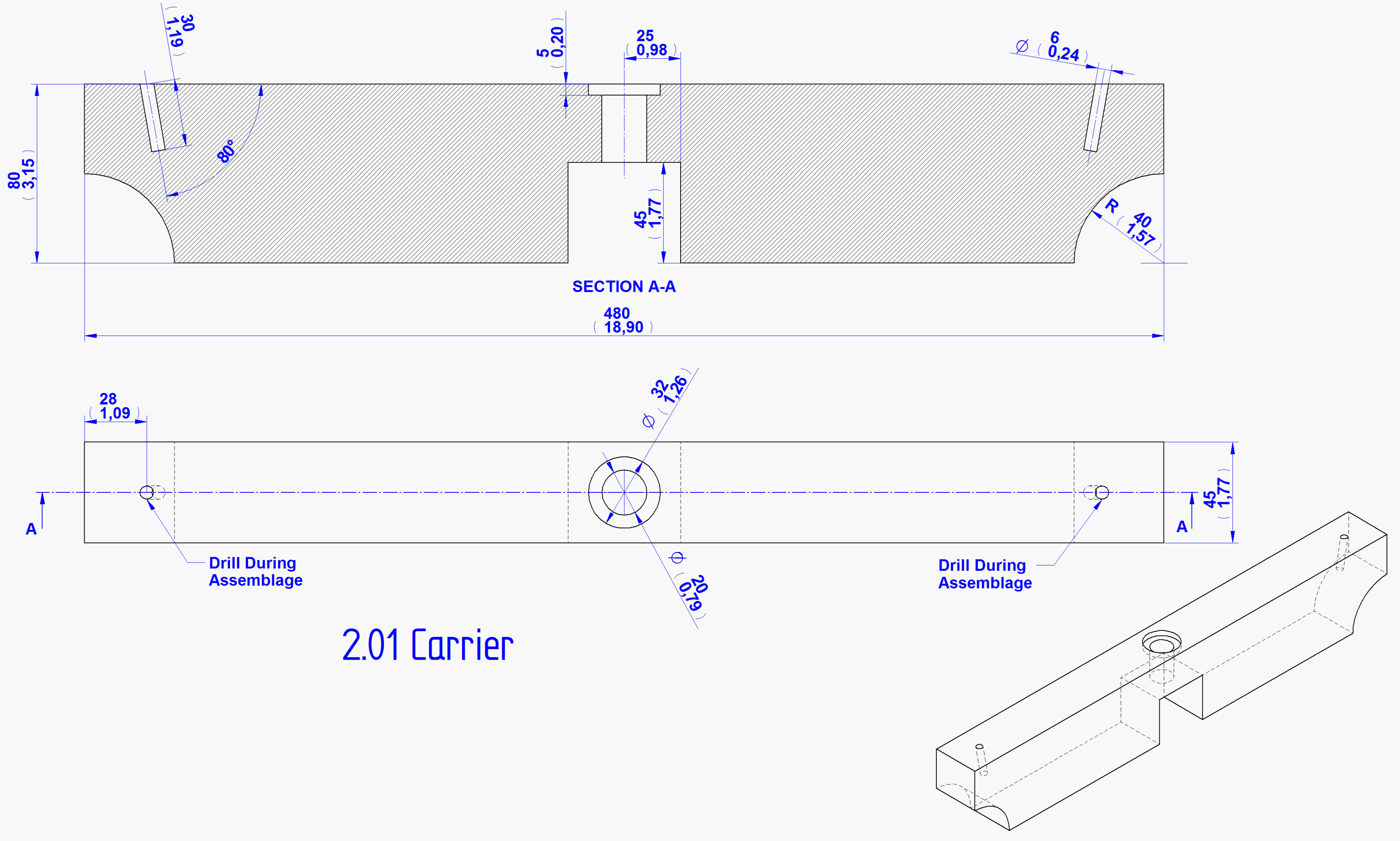
Parts List


DETAIL B
14 8
9 4
5 4
7 4
8 4
DETAIL A
12 4
10 4
A
11 3
1 2
6 4
20 1
22 2
16 1
2 1
3 2
13 3
17 1
21 4
4 4
18 1
15 1
19 2
B

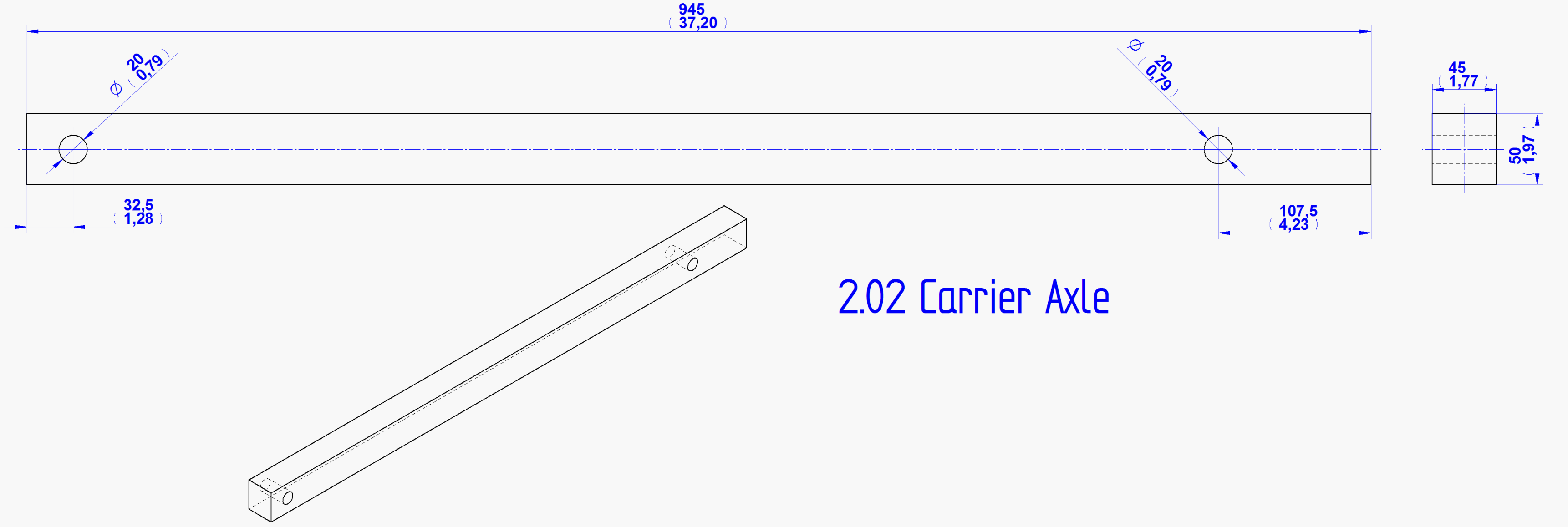
Item Number	Title	Material	Quantity	Category
1	Carrier	Wood	2	
2	Carrier Axle	Wood	1	
3	Axle	Wood	2	
4	Tubular Axle	Steel	4	
5	Axle Cover	Wood	4	
6	Leg	Wood	4	
7	Leg Holder Wire	Steel	4	
8	Pin D6mm	Steel	4	
9	Leg Holder Sheet Metal	Steel	4	
10	Limiter	Wood	4	
11	Pin D20 x 140mm	Steel	3	Standard Part
12	Side Support	Steel	4	
13	Split Pin D4 x 32mm	Steel	3	Standard Part
14	Tack D1,6 x 15mm	Steel	8	Standard Part
15	Curved Base Plank	Wood	1	
16	Back Base Plank	Wood	1	
17	Front Base Plank	Wood	1	
18	Pull Plank	Wood	1	
19	Handle	Wood	2	
20	Curved Base Plank Mirror	Wood	1	
21	Wood Screw D4x35mm	Steel	4	Standard Part
22	Wood Screw D4 x 60mm	Steel	2	Standard Part

Wheel Subassembly Drawing


2. Base
B
DETAIL A
108 (4,25)
45 (1,77)
529 (20,81)
A
B
356,5 (14,04)
805 (31,69)
918 (36,14)
SECTION B-B
260 (10,24)
155 (6,10)
560 (22,05)
85 (3,35)
C
45 (1,77)
45 (1,77)
45 (1,77)
45 (1,77)
100 (3,94)
SECTION D-D
280 (11,02)
230 (9,06)
D
D
50 (1,97)
230 (9,06)
260 (10,24)
C
SECTION C-C

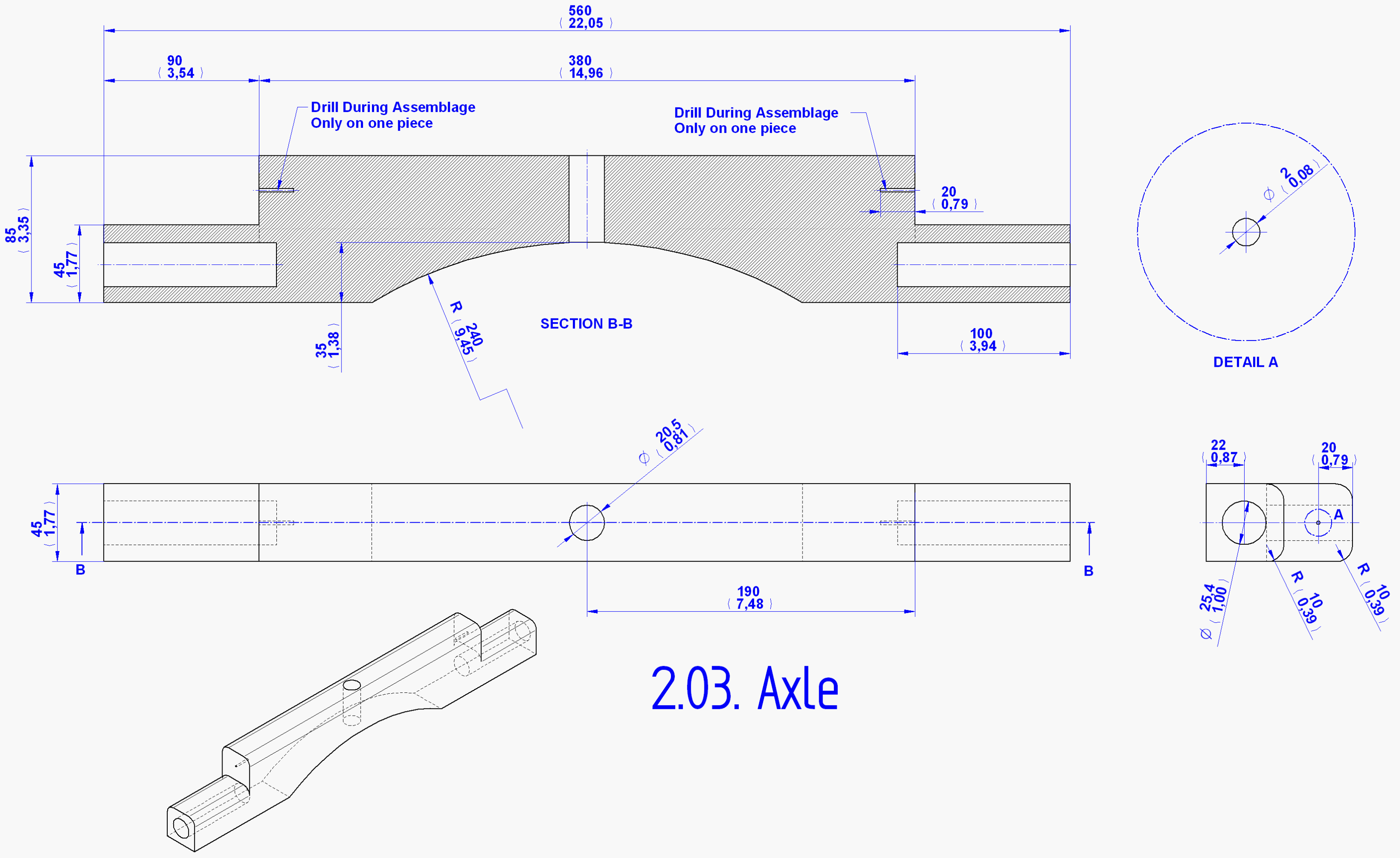

30
1,19
5
0,20
25
0,98
⌀ 6
0,24
80
3,15
80°
45
1,77
R 40
1,57
SECTION A-A
480
18,90
28
1,09
⌀ 32
1,26
⌀ 20
0,79
45
1,77
A
A
Drill During Assemblage
Drill During Assemblage

2.01 Carrier

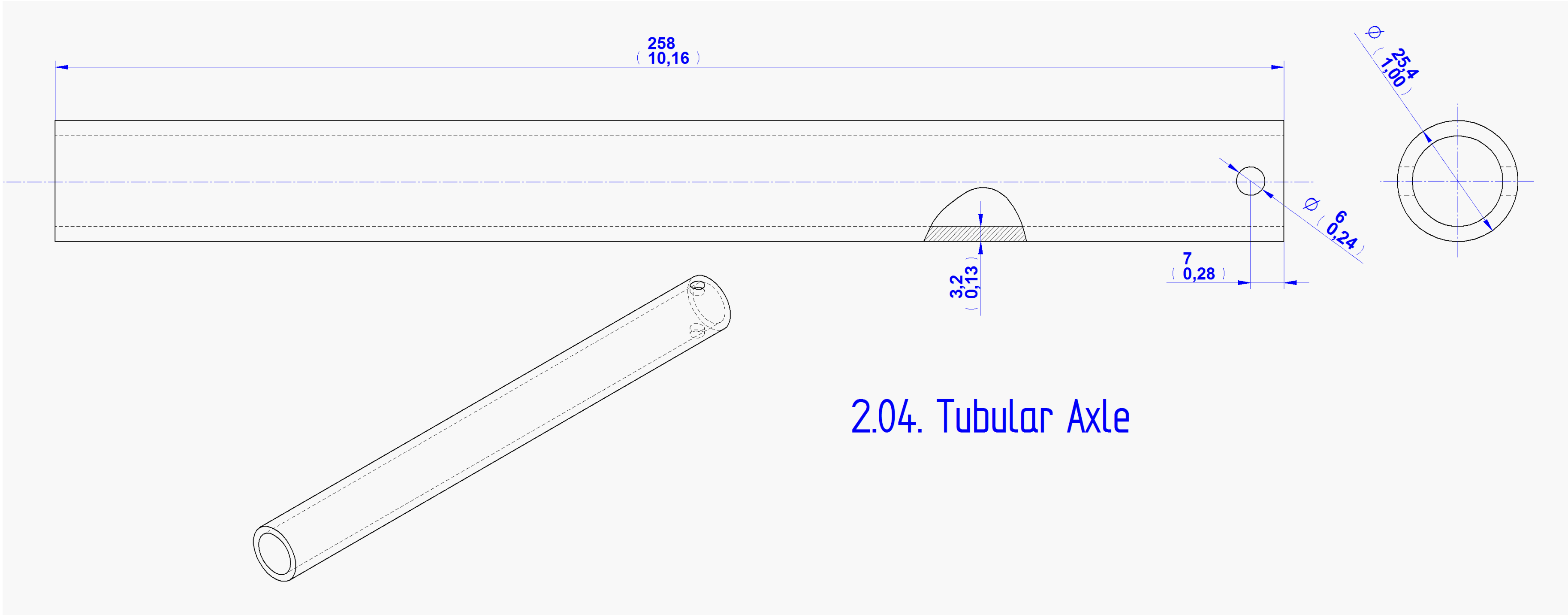


2.02 Carrier Axle

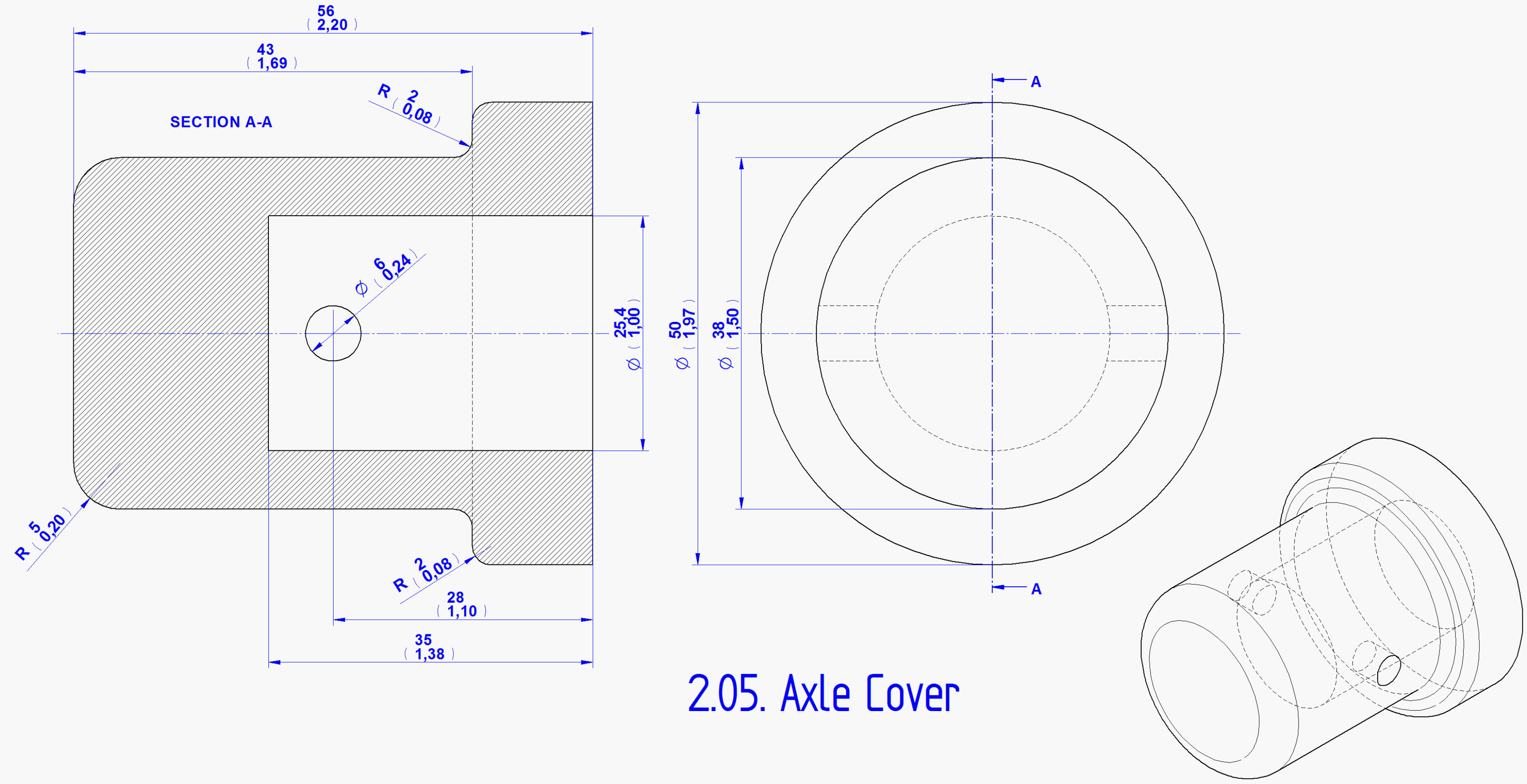
945
(37,20)
⌀ 20
(0,79)
⌀ 20
(0,79)
45
(1,77)
50
(1,97)
32,5
(1,28)
107,5
(4,23)


560
(22,05)
90
(3,54)
380
(14,96)
Drill During Assemblage
Only on one piece
Drill During Assemblage
Only on one piece
20
(0,79)
85
(3,35)
45
(1,77)
35
(1,38)
R 240
(9,45)
SECTION B-B
100
(3,94)
⌀ 2
(0,08)
DETAIL A
⌀ 20,5
(0,81)
45
(1,77)
B
B
190
(7,48)
22
(0,87)
20
(0,79)
A
⌀ 25,4
(1,00)
R 10
(0,39)
R 10
(0,39)

2.03. Axle

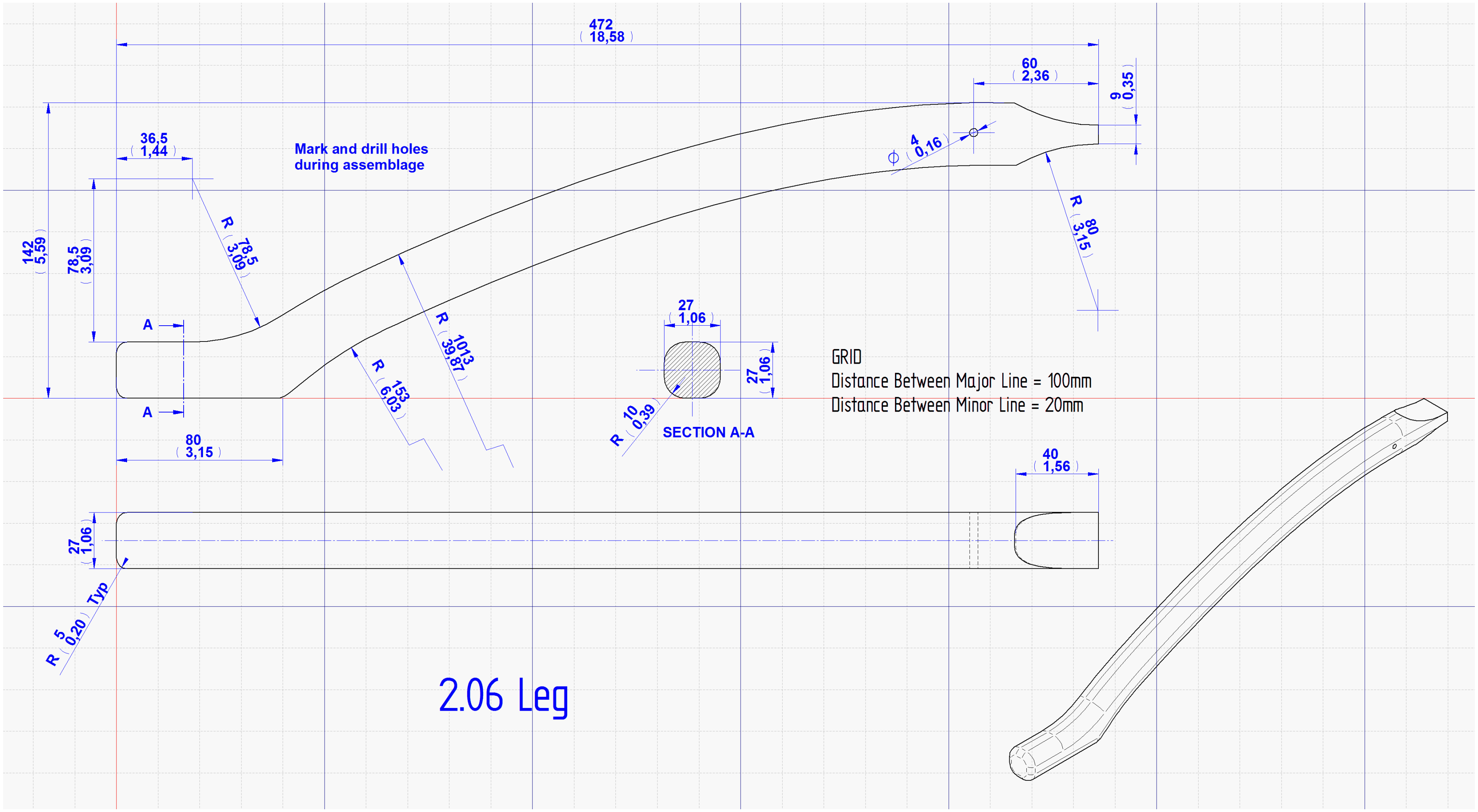

258
(10,16)
⌀ 25,4
(1,00)
⌀ 6
(0,24)
7
(0,28)
3,2
(0,13)

2.04. Tubular Axle



56
(2,20)
43
(1,69)
R 2 (0,08)
SECTION A-A
⌀ 6 (0,24)
⌀ 25,4 (1,00)
⌀ 50 (1,97)
⌀ 38 (1,50)
A
A
R 5 (0,20)
R 2 (0,08)
28
(1,10)
35
(1,38)

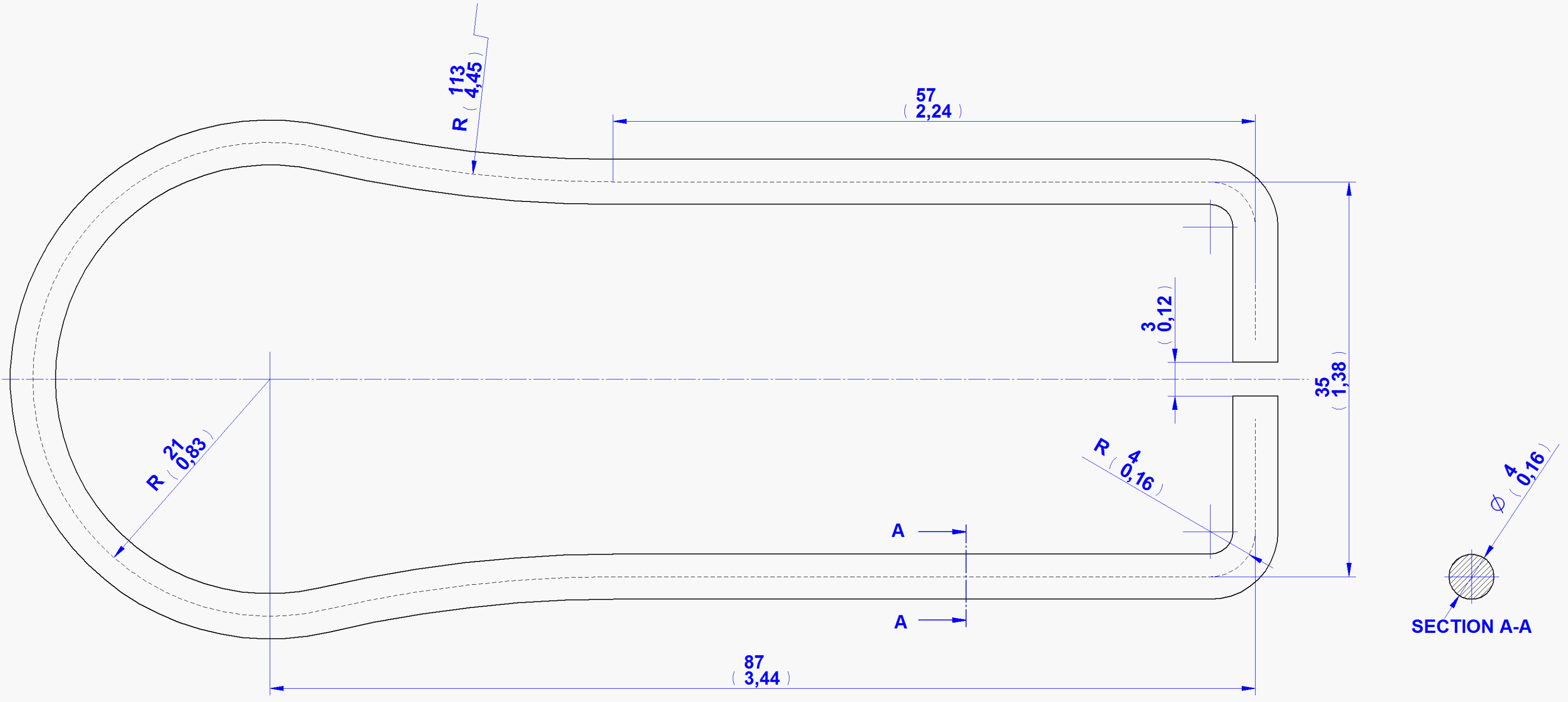
2.05. Axle Cover


472
(18,58)
60
(2,36)
9
(0,35)
36,5
(1,44)
142
(5,59)
78,5
(3,09)
R 78,5
(3,09)
ϕ 4
(0,16)
R 80
(3,15)
R 1013
(39,87)
R 153
(6,03)
A
A
80
(3,15)
27
(1,06)
27
(1,06)
R 10
(0,39)
SECTION A-A
40
(1,56)
27
(1,06)
R 5
(0,20) Typ

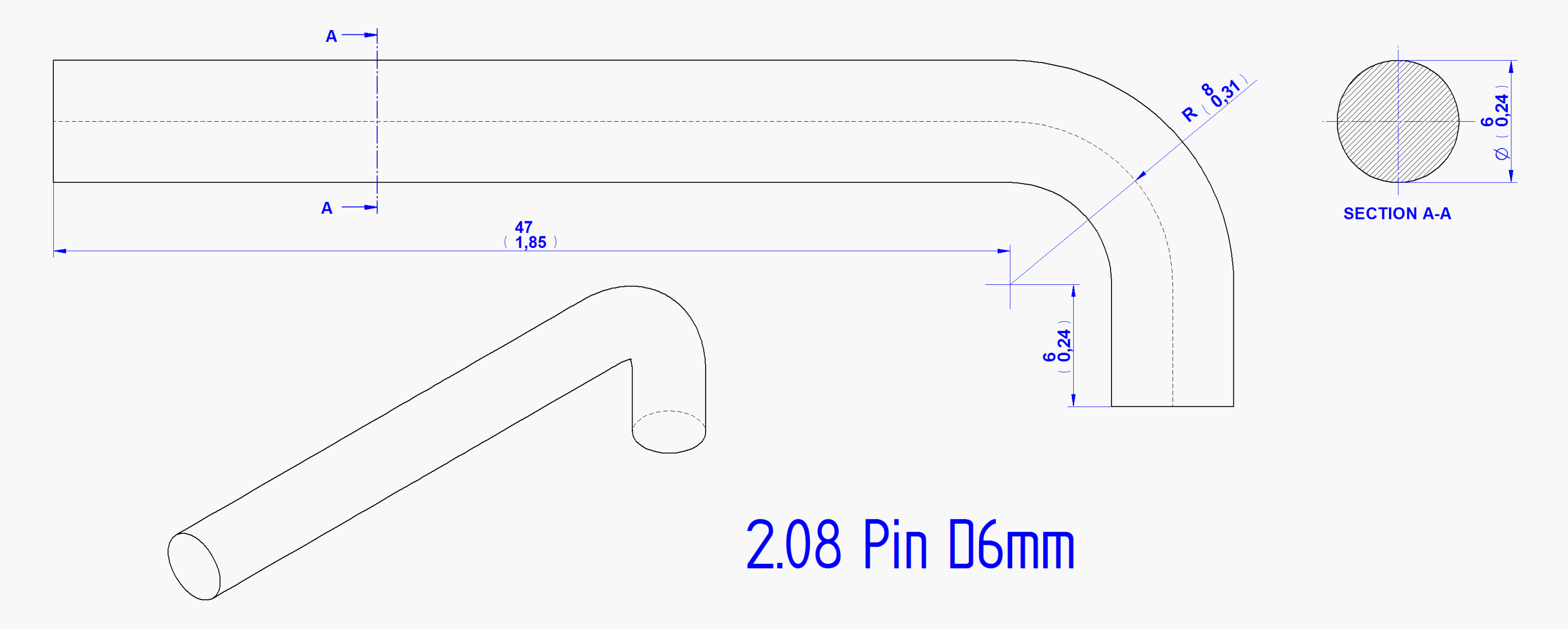
Mark and drill holes during assemblage

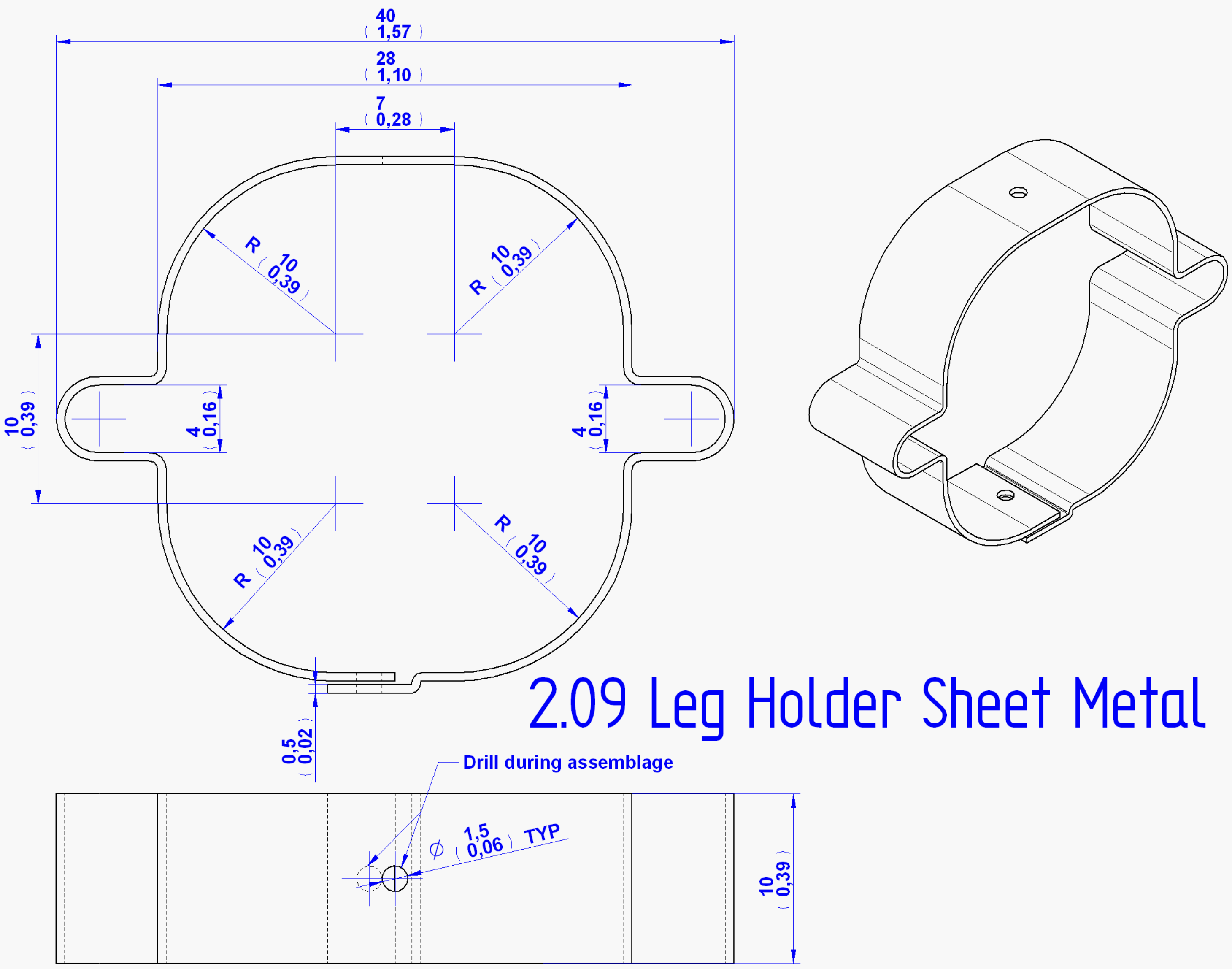
GRID
Distance Between Major Line = 100mm
Distance Between Minor Line = 20mm

2.06 Leg

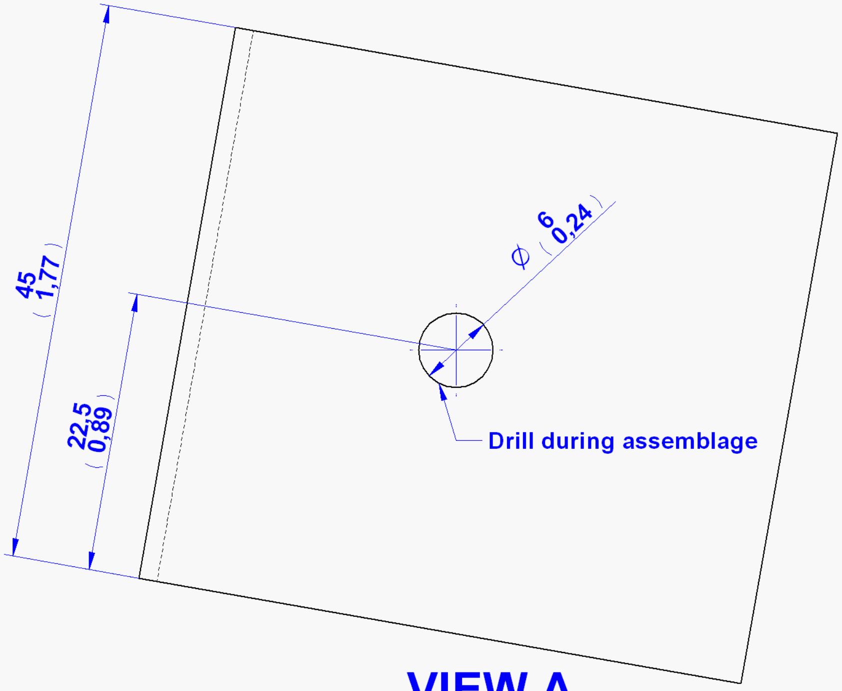

R 113 (4,45)
57 (2,24)
3 (0,12)
35 (1,38)
R 21 (0,83)
R 4 (0,16)
⌀ 4 (0,16)
A
A
87 (3,44)
SECTION A-A

2.07 Leg Holder Wire

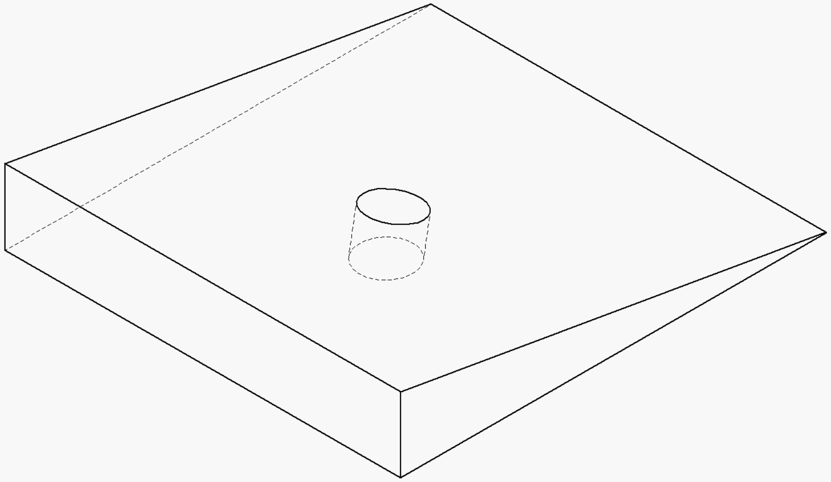

A
A
47
(1,85)
R 8
(0,31)
6
(0,24)
6
⌀ (0,24)
SECTION A-A
2.08 Pin D6mm

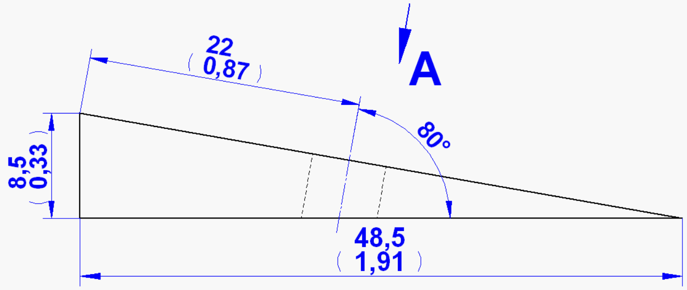

40
(1,57)
28
(1,10)
7
(0,28)
R 10 (0,39)
R 10 (0,39)
R 10 (0,39)
R 10 (0,39)
10 (0,39)
4 (0,16)
4 (0,16)
0,5 (0,02)
Drill during assemblage
⌀ 1,5 (0,06) TYP
10 (0,39)

2.09 Leg Holder Sheet Metal

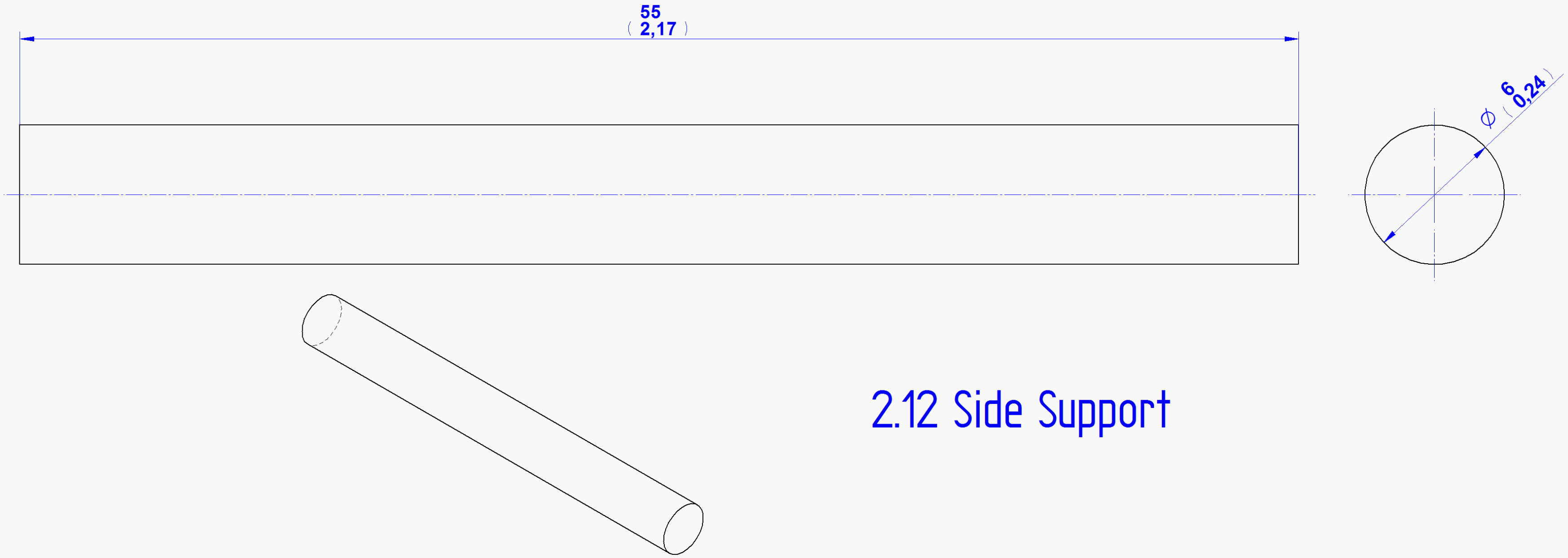

45
(1,77)
22,5
(0,89)
⌀ 6
(0,24)
Drill during assemblage

VIEW A

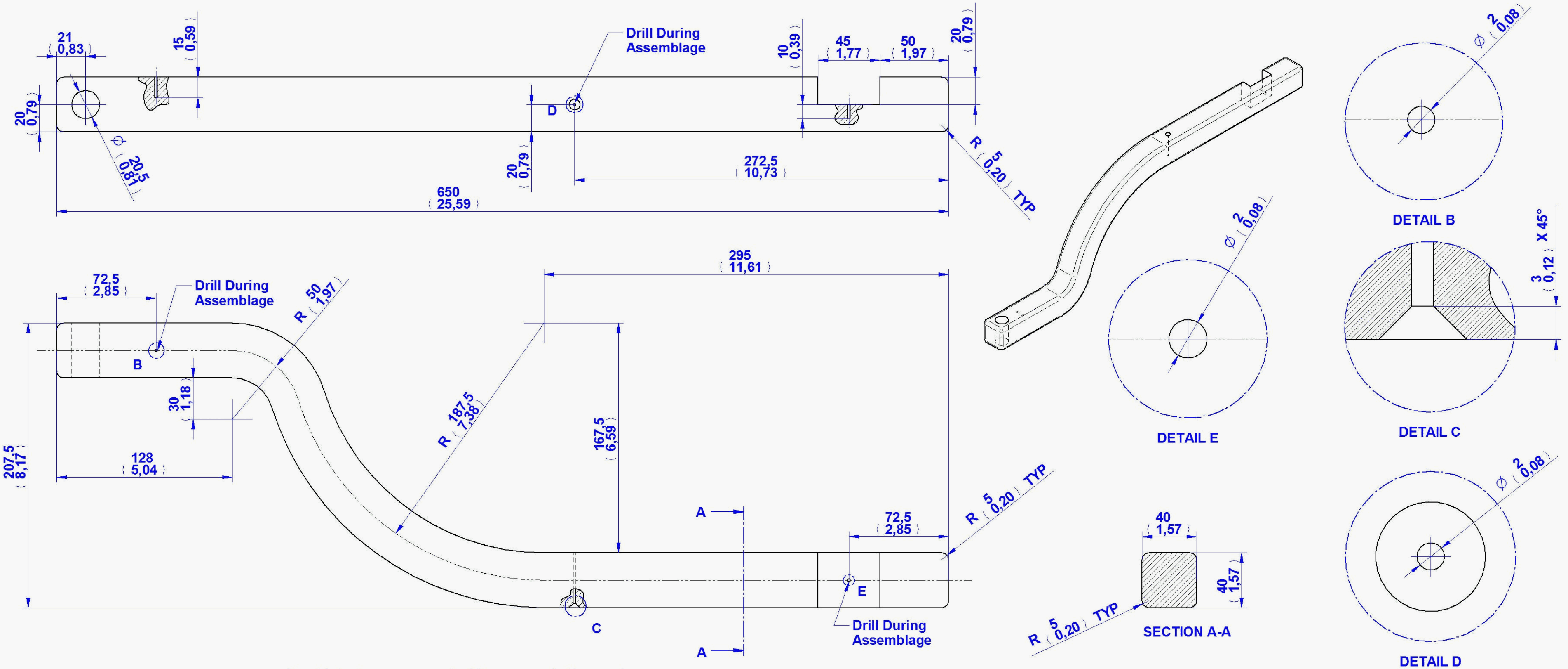



22
(0,87)
A
80°
8,5
(0,33)
48,5
(1,91)

2.10 Limiter

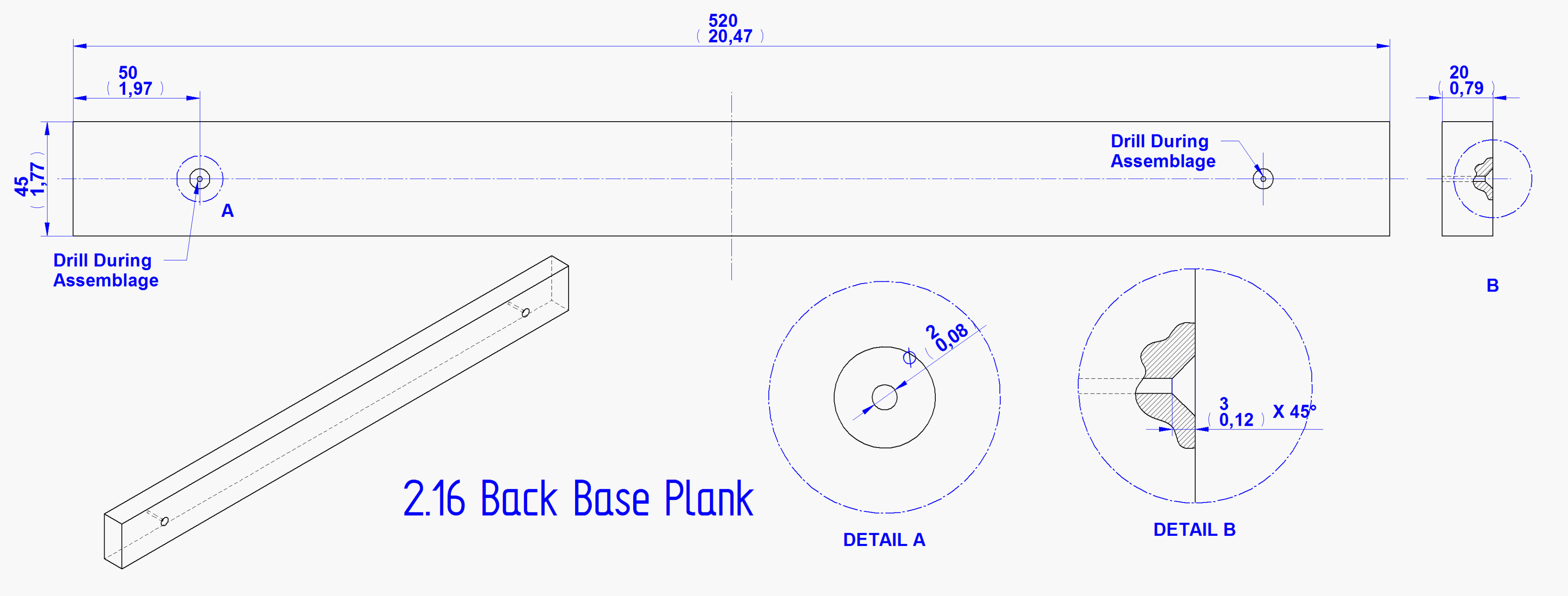


2.12 Side Support

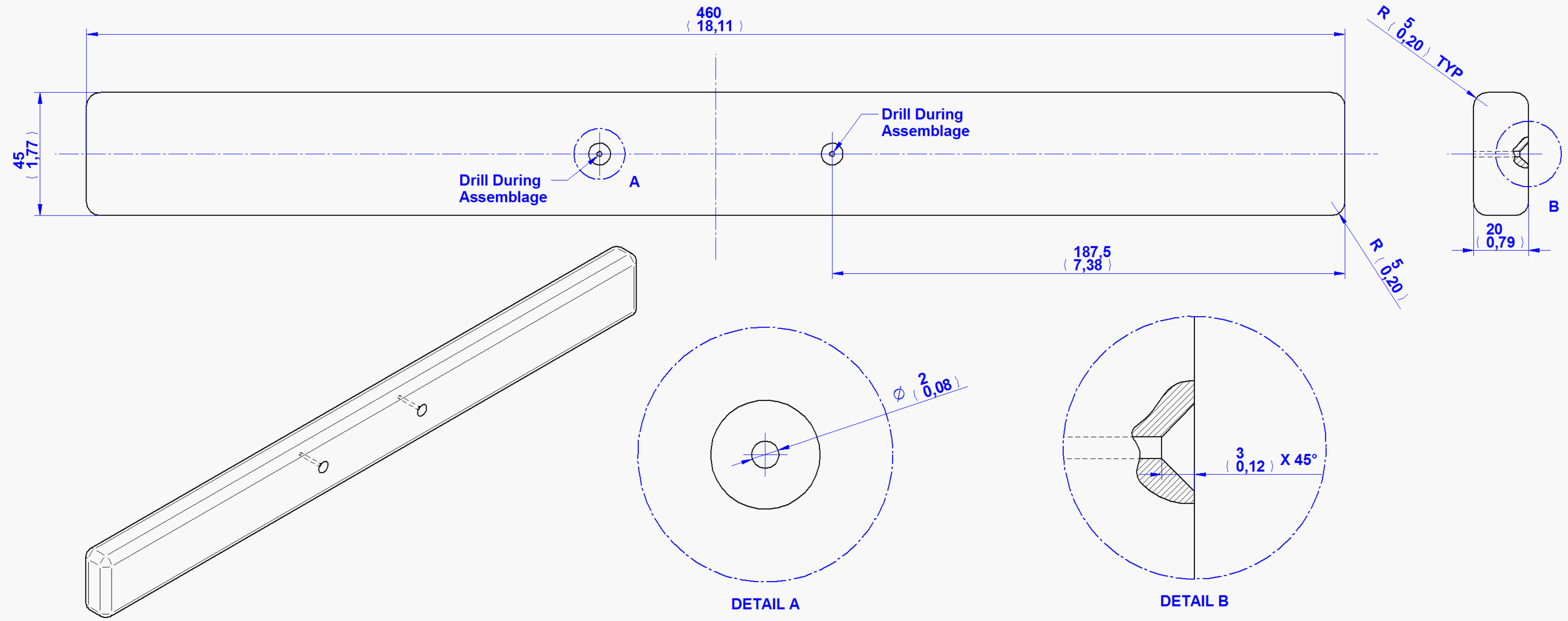

21
(0,83)
15
(0,59)
Drill During
Assemblage
10
(0,39)
45
(1,77)
50
(1,97)
20
(0,79)
20
(0,79)
D
ϕ 20,5
(0,81)
20
(0,79)
272,5
(10,73)
650
(25,59)
R 5
(0,20) TYP
295
(11,61)
72,5
(2,85)
Drill During
Assemblage
R 50
(1,97)
B
30
(1,18)
207,5
(8,17)
128
(5,04)
R 187,5
(7,38)
167,5
(6,59)
A
A
72,5
(2,85)
R 5
(0,20) TYP
E
C
Drill During
Assemblage
ϕ 2
(0,08)
DETAIL B
ϕ 2
(0,08)
DETAIL E
3
(0,12) X 45°
DETAIL C
40
(1,57)
40
(1,57)
R 5
(0,20) TYP
SECTION A-A
ϕ 2
(0,08)
DETAIL D

2.15 Curved Base Plank

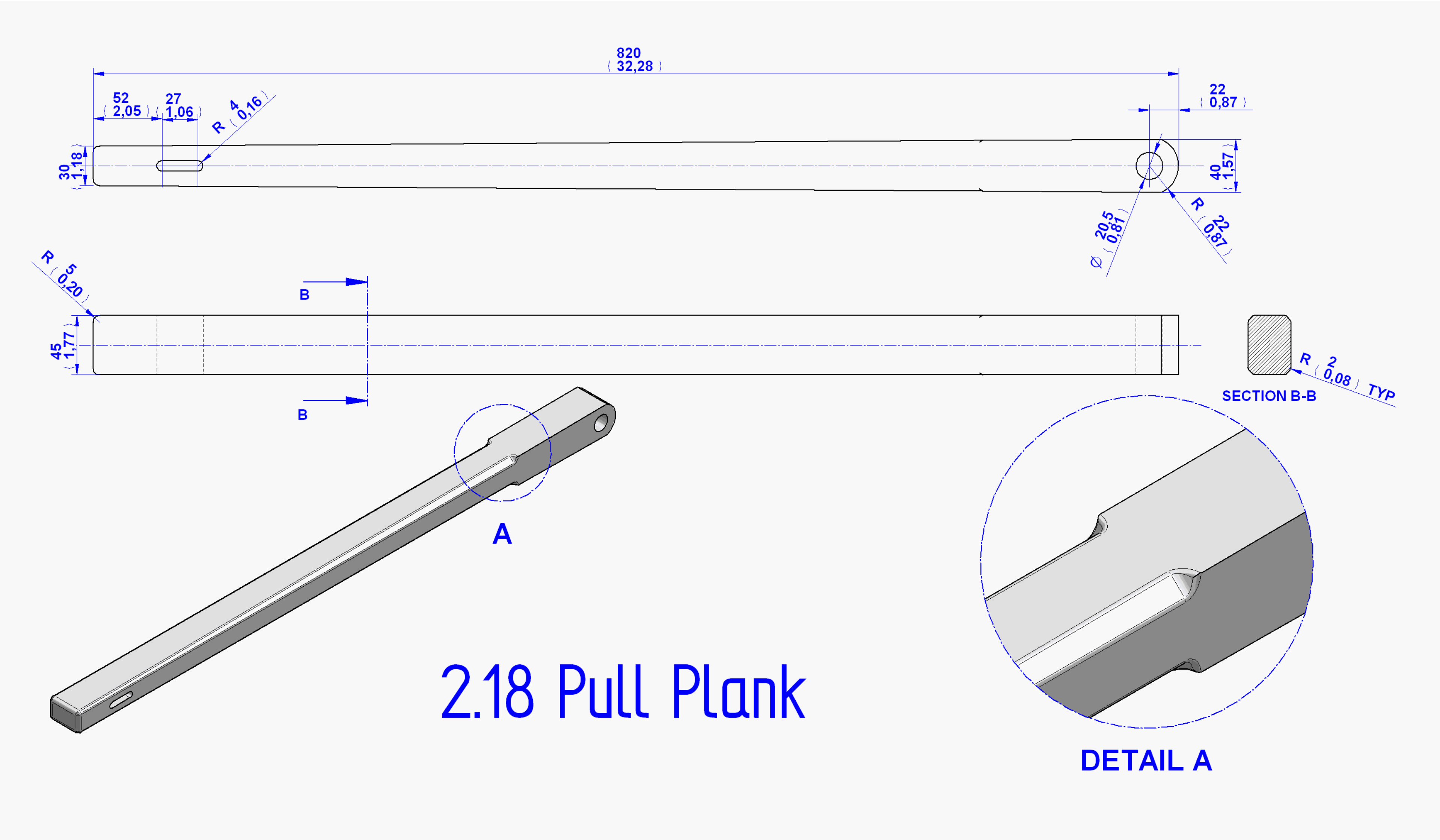
2.16 Back Base Plank


520
(20,47)
50
(1,97)
20
(0,79)
45
(1,77)
Drill During Assemblage
Drill During Assemblage
A
B
Ø 2
(0,08)
3
(0,12) X 45°
DETAIL A
DETAIL B

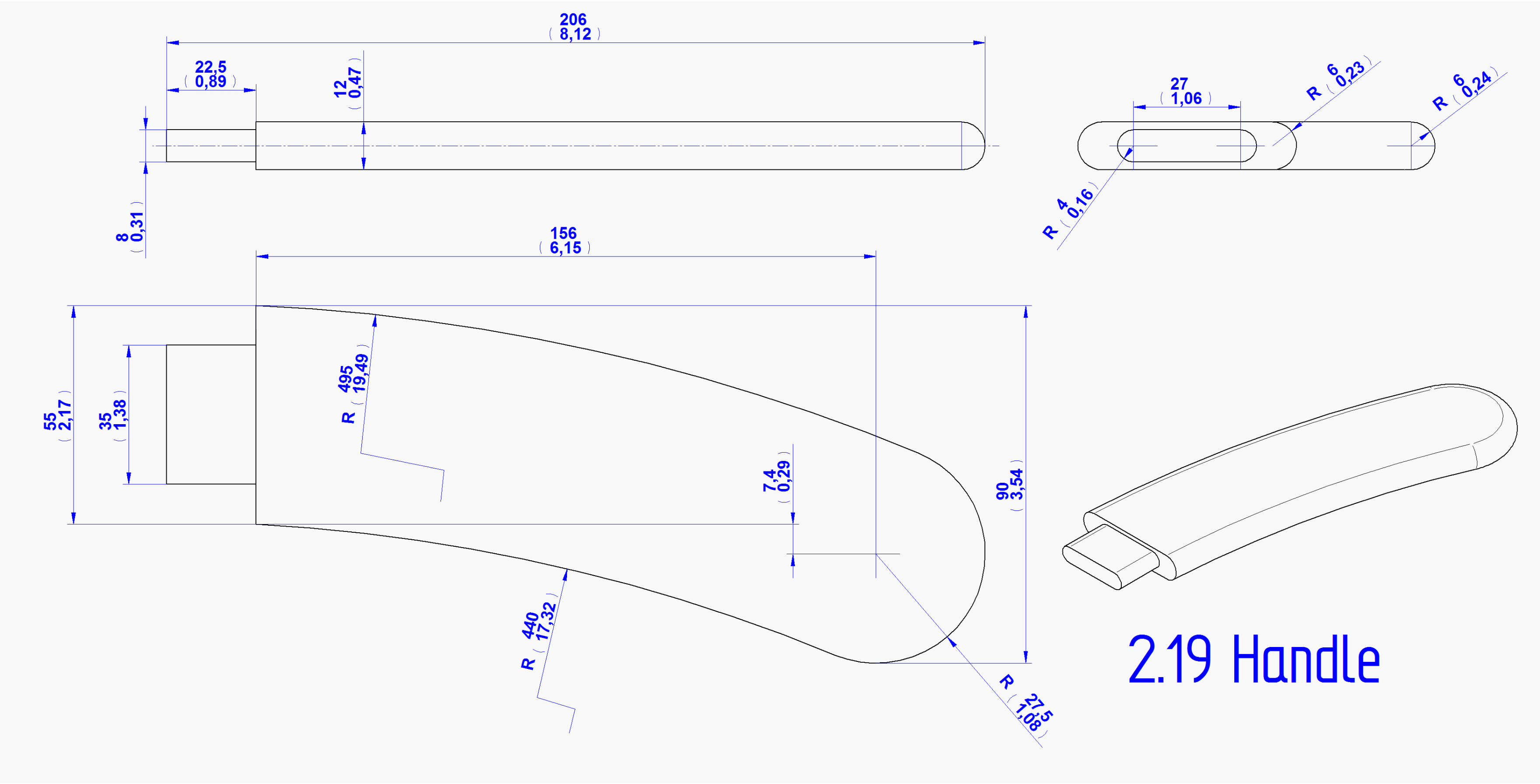
2.17 Front Base Plank

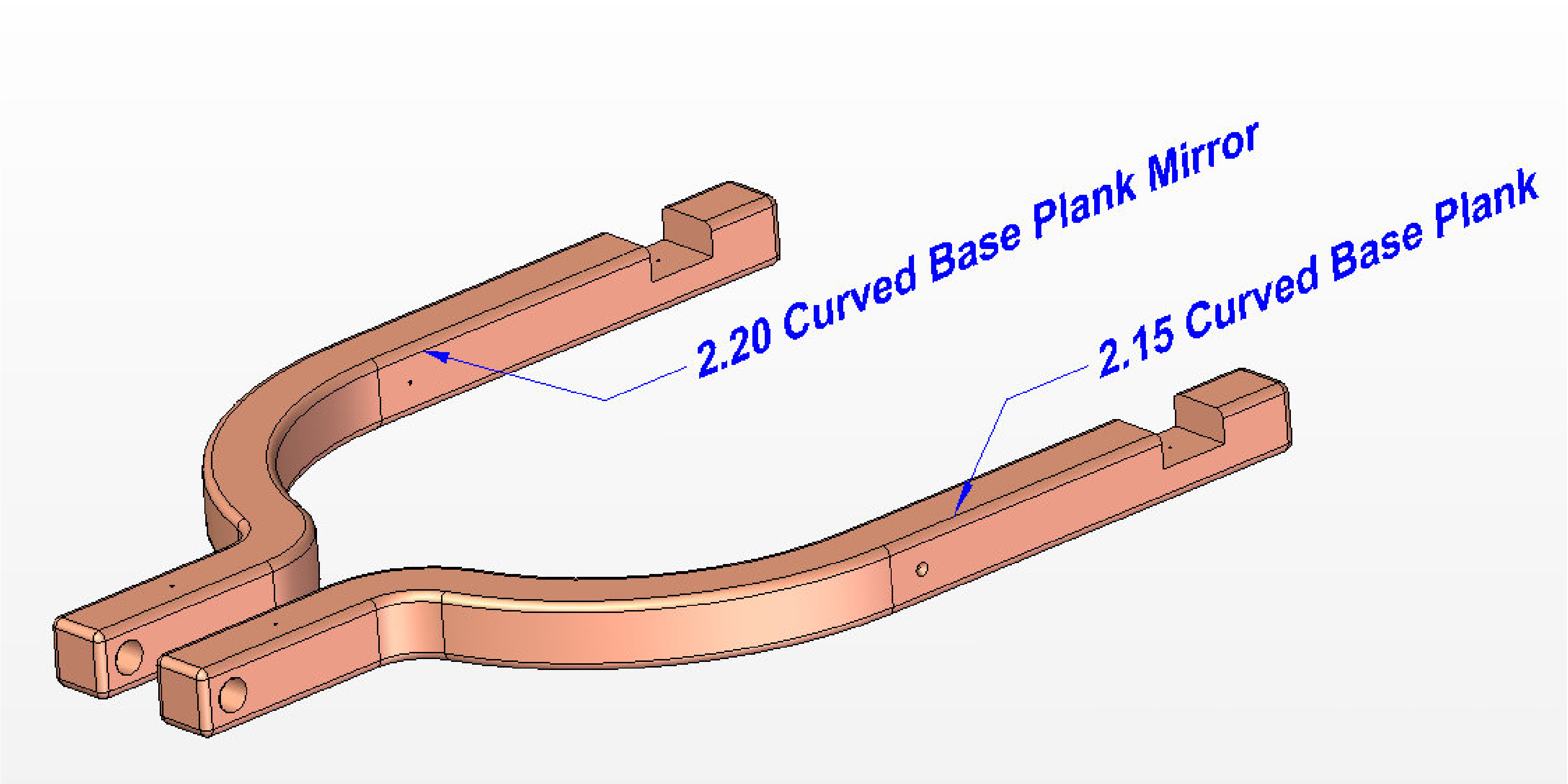

460
(18,11)
45
(1,77)
Drill During
Assemblage
A
Drill During
Assemblage
187,5
(7,38)
R 5
(0,20) TYP
R 5
(0,20)
B
20
(0,79)
⌀ 2
(0,08)
3
(0,12) X 45°
DETAIL A
DETAIL B

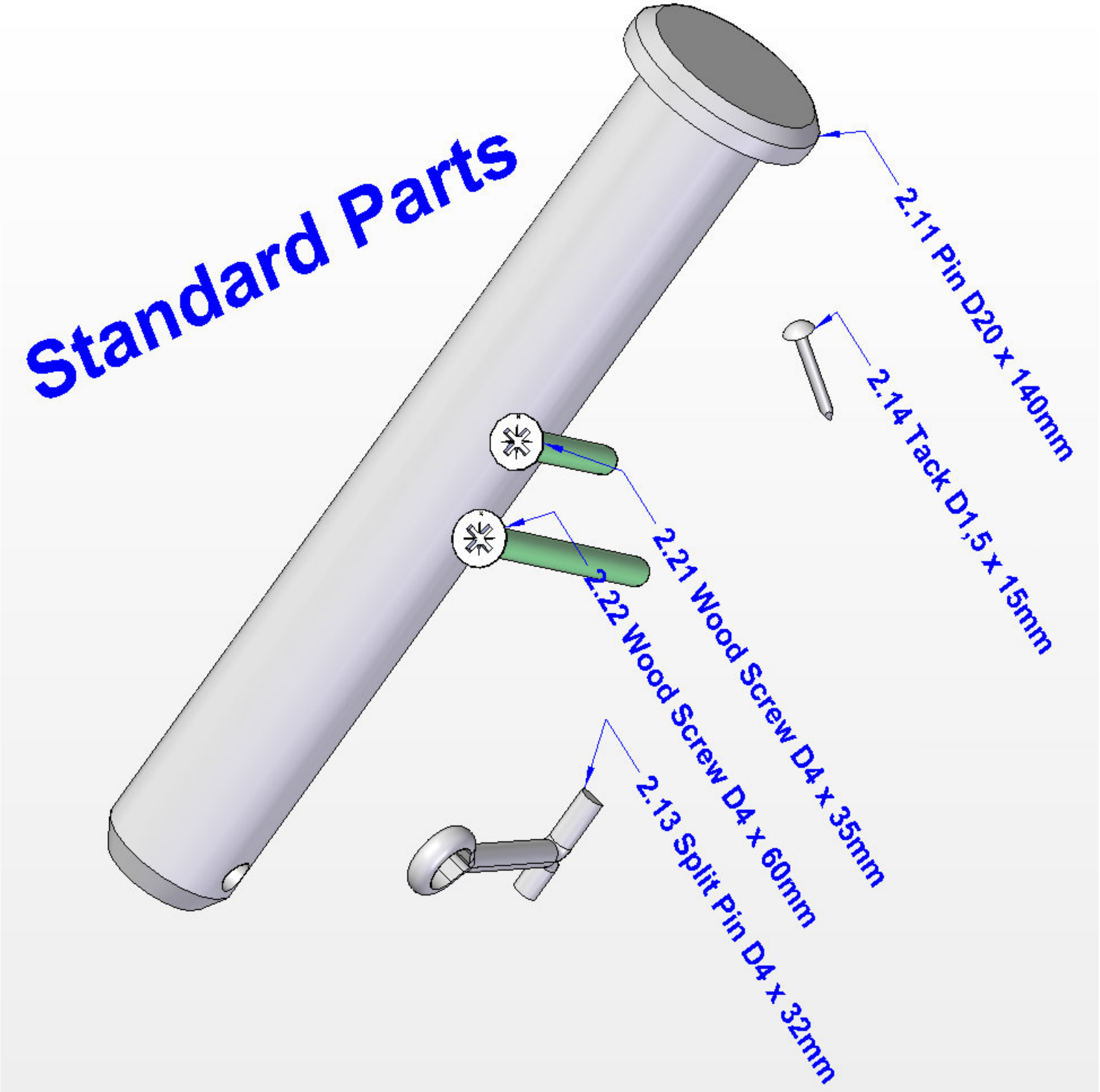
2.18 Pull Plank


820
(32,28)
52
(2,05)
27
(1,06)
R 4 (0,16)
22
(0,87)
30
(1,18)
40
(1,57)
⌀ 20,5 (0,81)
R 22 (0,87)
R 5 (0,20)
45
(1,77)
B
B
R 2 (0,08) TYP
SECTION B-B
A
DETAIL A

2.19 Handle

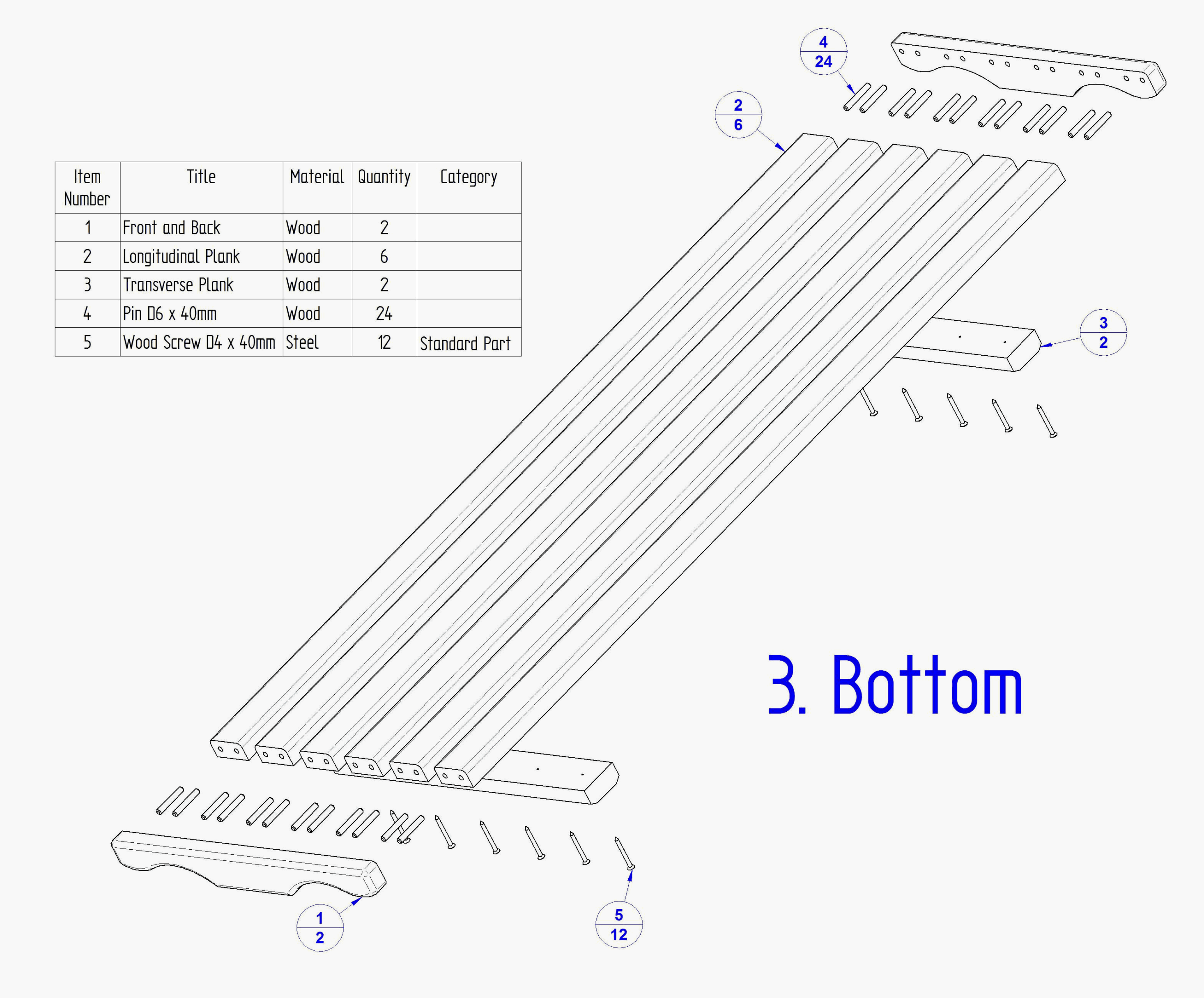

206
(8,12)
22,5
(0,89)
12
(0,47)
8
(0,31)
27
(1,06)
R 6
(0,23)
R 6
(0,24)
R 4
(0,16)
156
(6,15)
55
(2,17)
35
(1,38)
R 495
(19,49)
7,4
(0,29)
90
(3,54)
R 440
(17,32)
R 27,5
(1,08)


2.20 Curved Base Plank Mirror
2.15 Curved Base Plank


Standard Parts
2.11 Pin D20 x 140mm
2.14 Tack D1,5 x 15mm
2.21 Wood Screw D4 x 35mm
2.22 Wood Screw D4 x 60mm
2.13 Split Pin D4 x 32mm

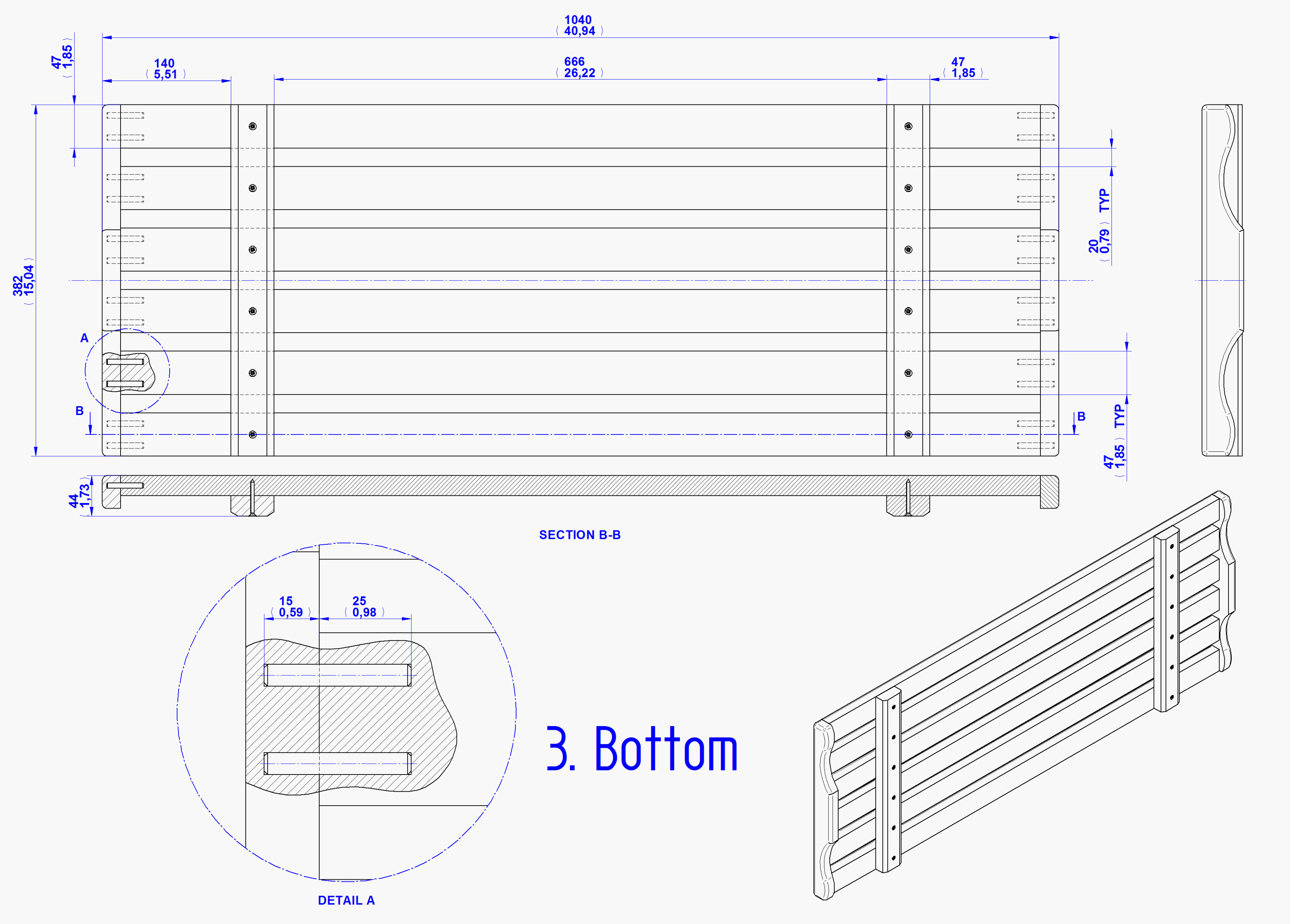
3. Bottom Subassembly

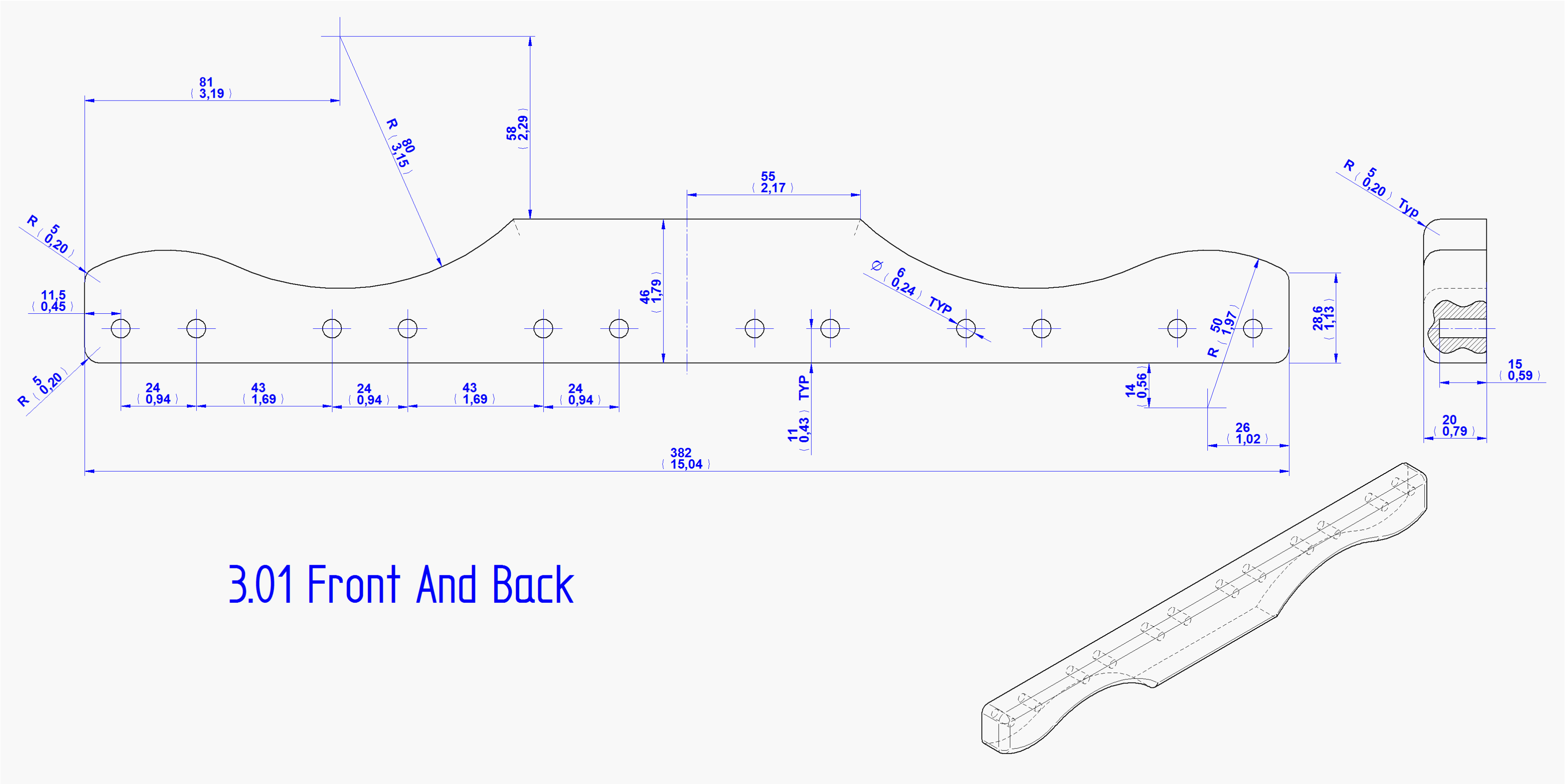
Parts List



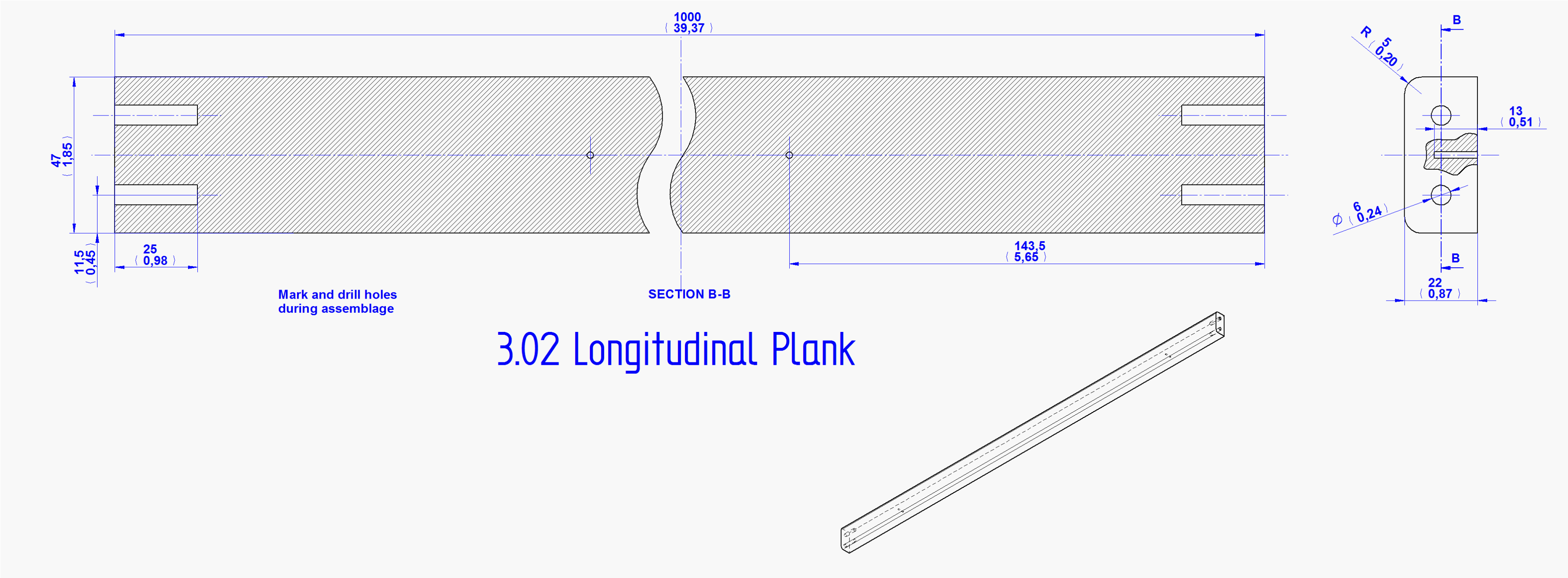
Item Number	Title	Material	Quantity	Category
1	Front and Back	Wood	2	
2	Longitudinal Plank	Wood	6	
3	Transverse Plank	Wood	2	
4	Pin D6 x 40mm	Wood	24	
5	Wood Screw D4 x 40mm	Steel	12	Standard Part

Bottom Subassembly Drawing


1040
(40,94)
140
(5,51)
666
(26,22)
47
(1,85)
47
(1,85)
382
(15,04)
TYP
20
(0,79)
TYP
47
(1,85)
A
B
B
44
(1,73)
SECTION B-B
15
(0,59)
25
(0,98)
DETAIL A
3. Bottom


81 (3,19)
R (80 3,15)
58 (2,29)
55 (2,17)
R (5 0,20)
11,5 (0,45)
46 (1,79)
Ø (6 0,24) TYP
R (50 1,97)
28,6 (1,13)
R (5 0,20)
24 (0,94)
43 (1,69)
24 (0,94)
43 (1,69)
24 (0,94)
11 (0,43) TYP
14 (0,56)
26 (1,02)
382 (15,04)
R (5 0,20) Typ
15 (0,59)
20 (0,79)

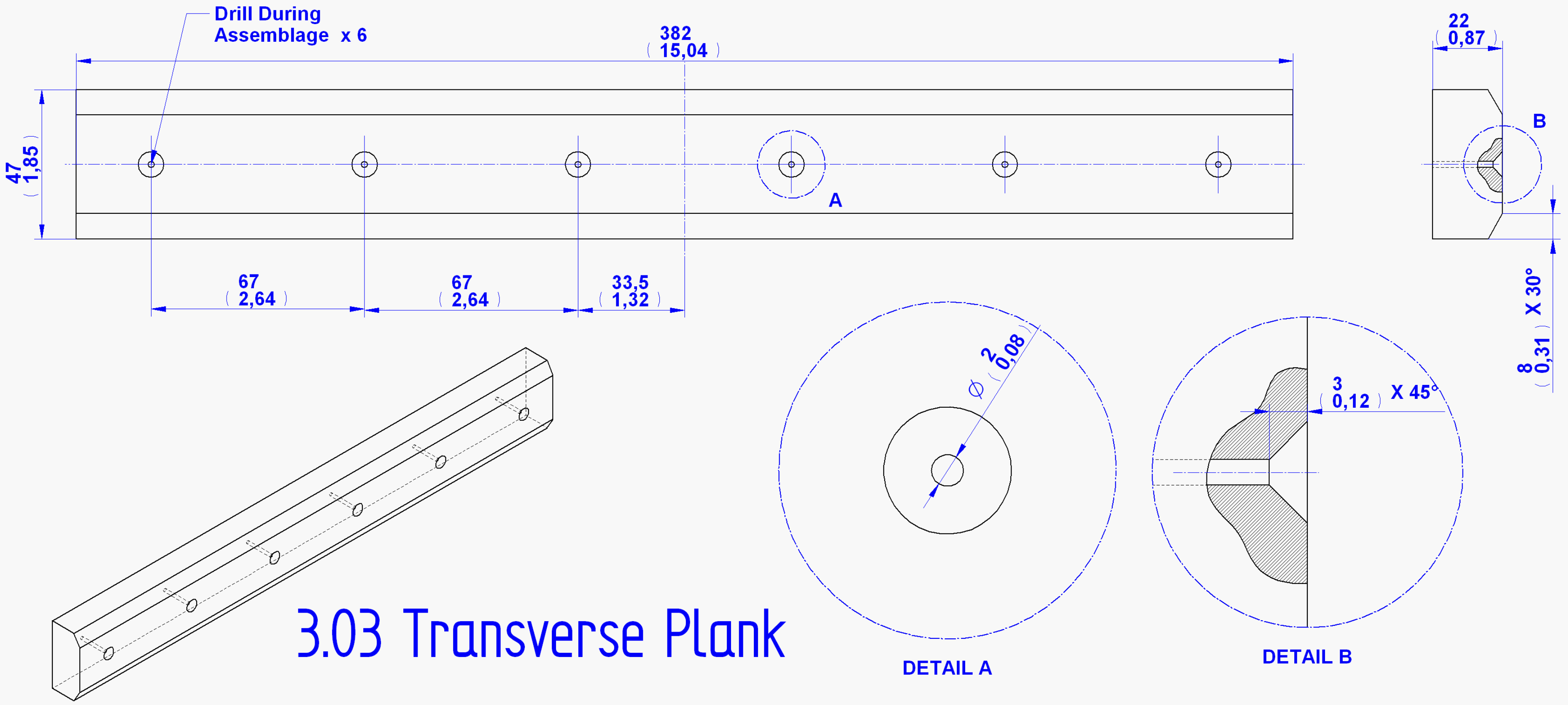
3.01 Front And Back


1000
(39,37)
47
(1,85)
11,5
(0,45)
25
(0,98)
143,5
(5,65)
R 5
(0,20)
B
13
(0,51)
⌀ 6
(0,24)
B
22
(0,87)

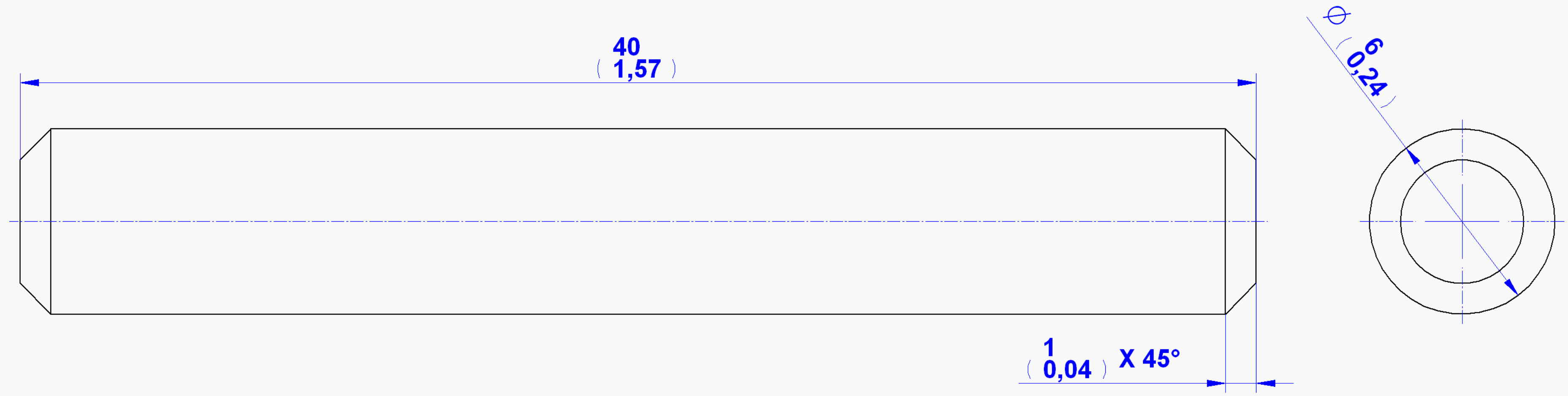
Mark and drill holes during assemblage

SECTION B-B

3.02 Longitudinal Plank

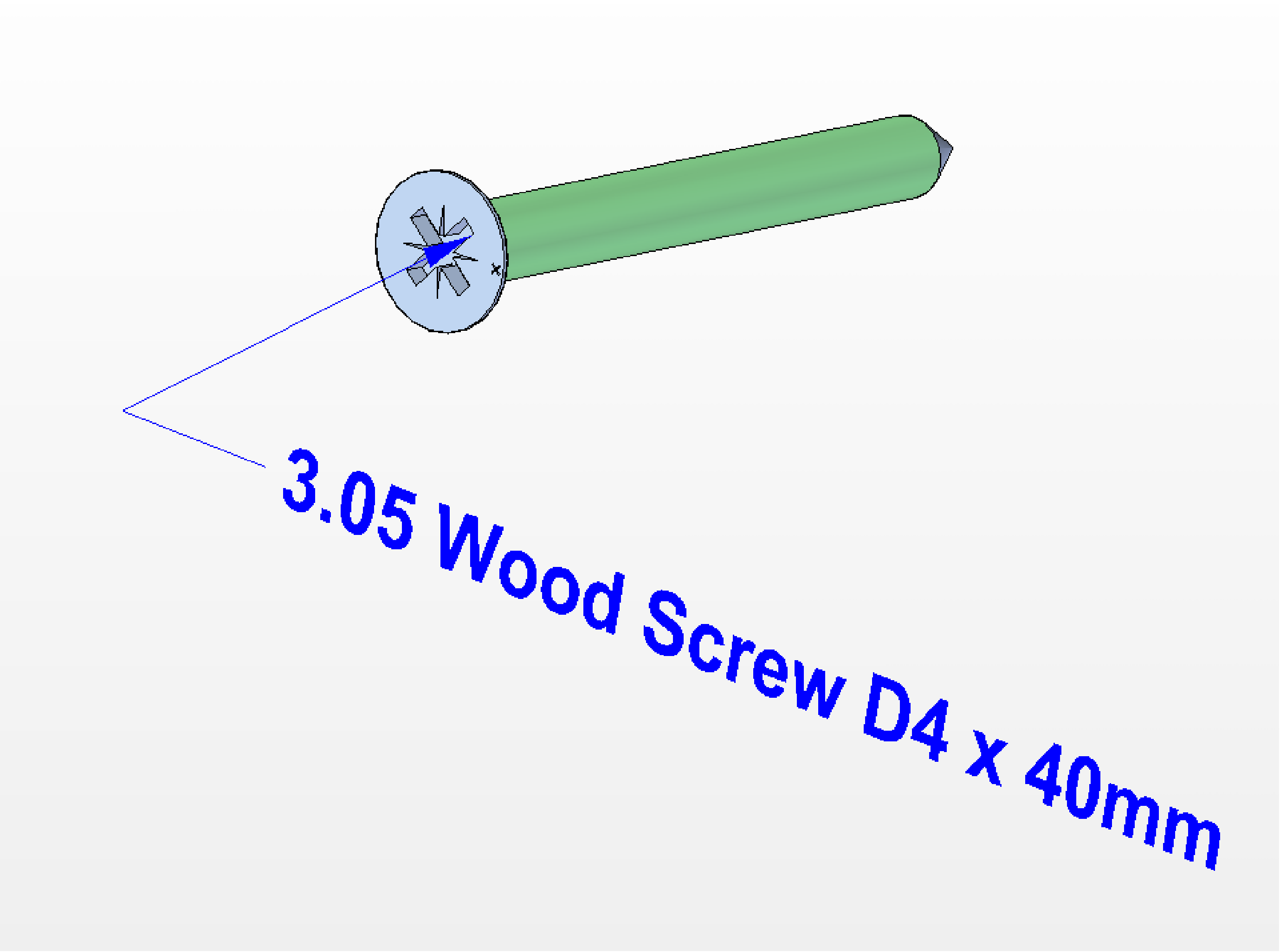

Drill During
Assemblage x 6
382
(15,04)
47
(1,85)
A
67
(2,64)
67
(2,64)
33,5
(1,32)
22
(0,87)
B
8
(0,31) X 30°
⌀ 2
(0,08)
3
(0,12) X 45°
DETAIL A
DETAIL B

3.03 Transverse Plank

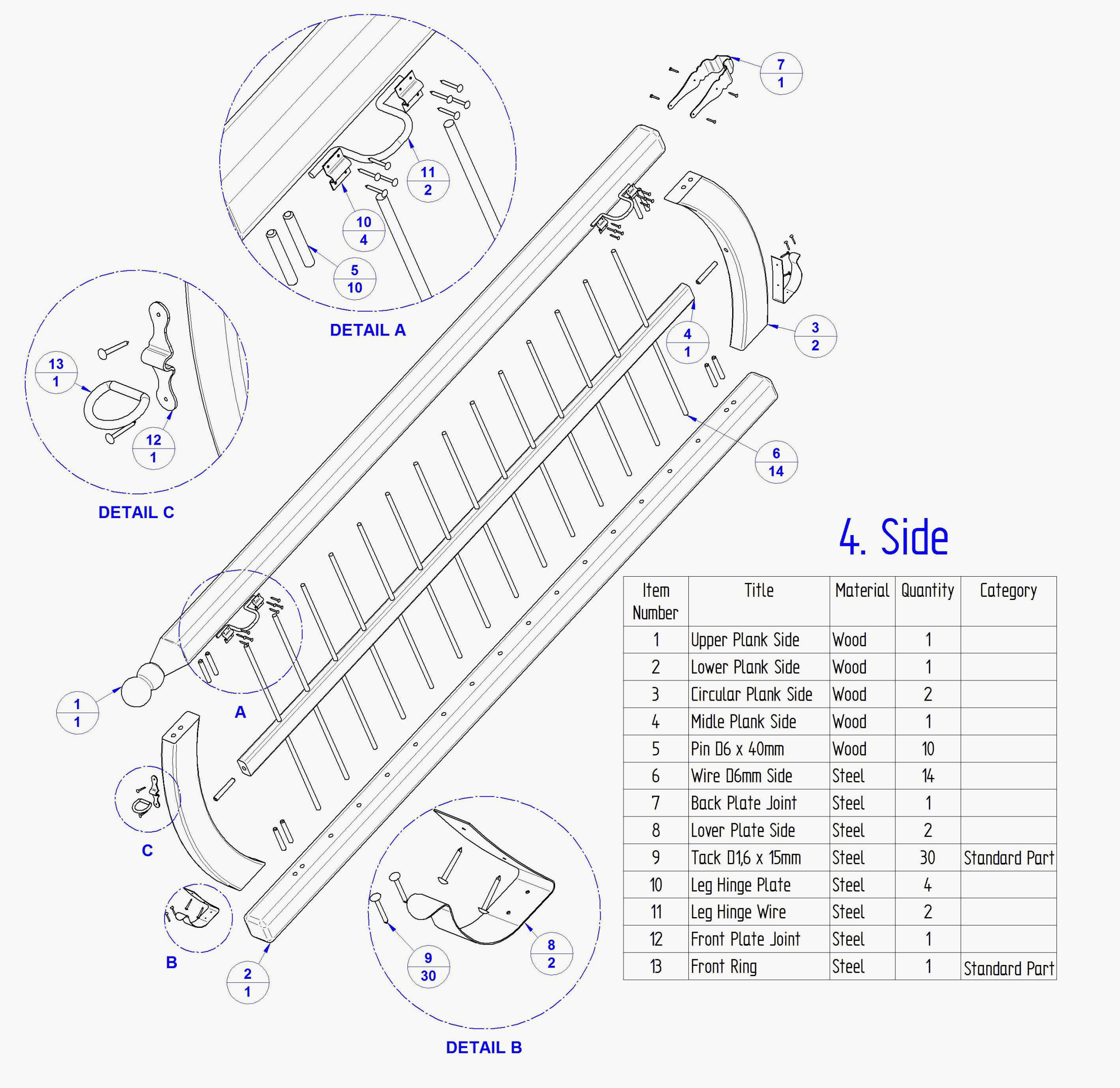

40
(1,57)
Φ 6
(0,24)
1
(0,04) X 45°

3.04 Pin D6 x 40mm

4.05 Pin D6 x 40mm


3.05 Wood Screw D4 x 40mm

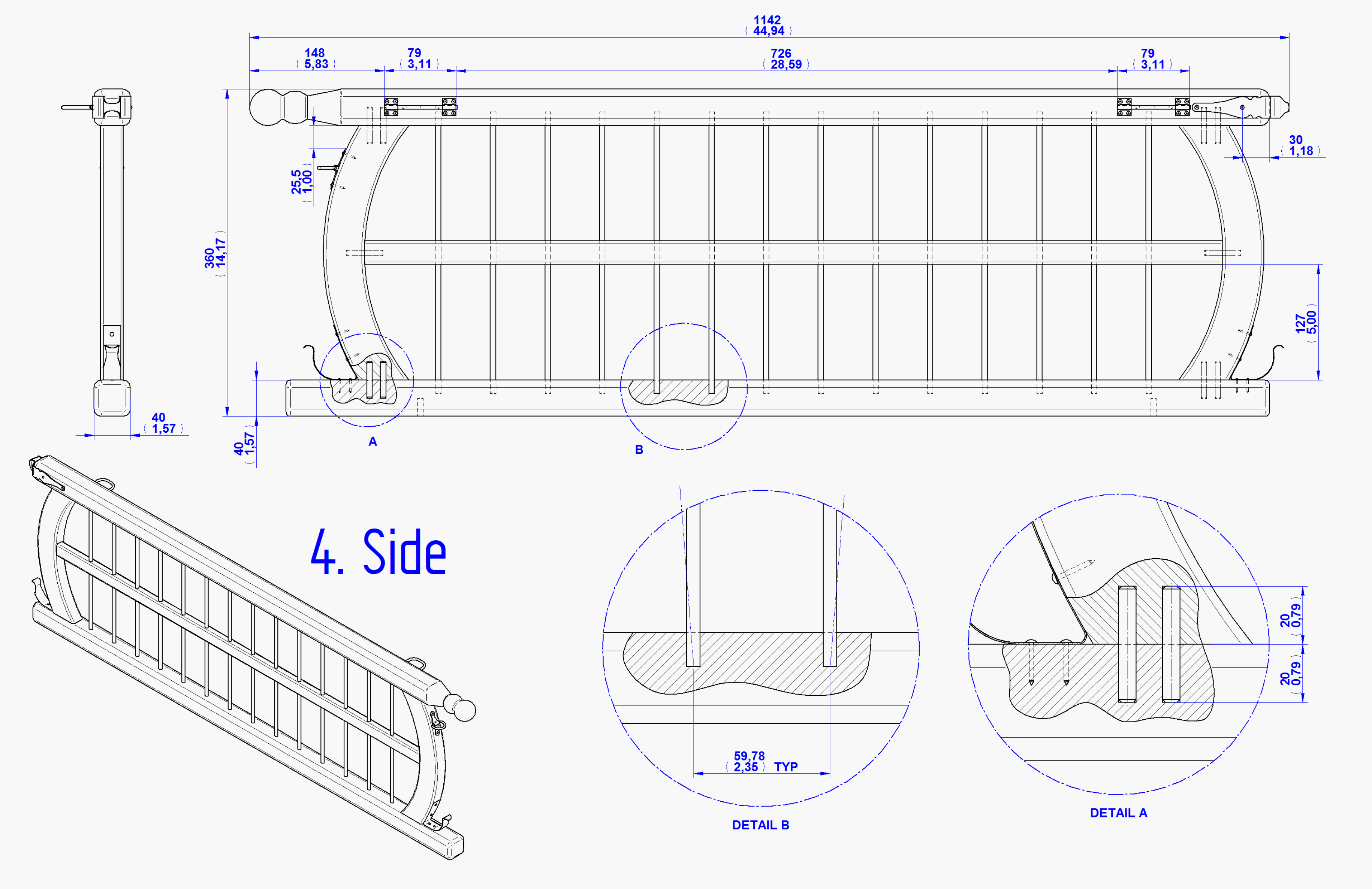
4. Side Subassembly
Parts List

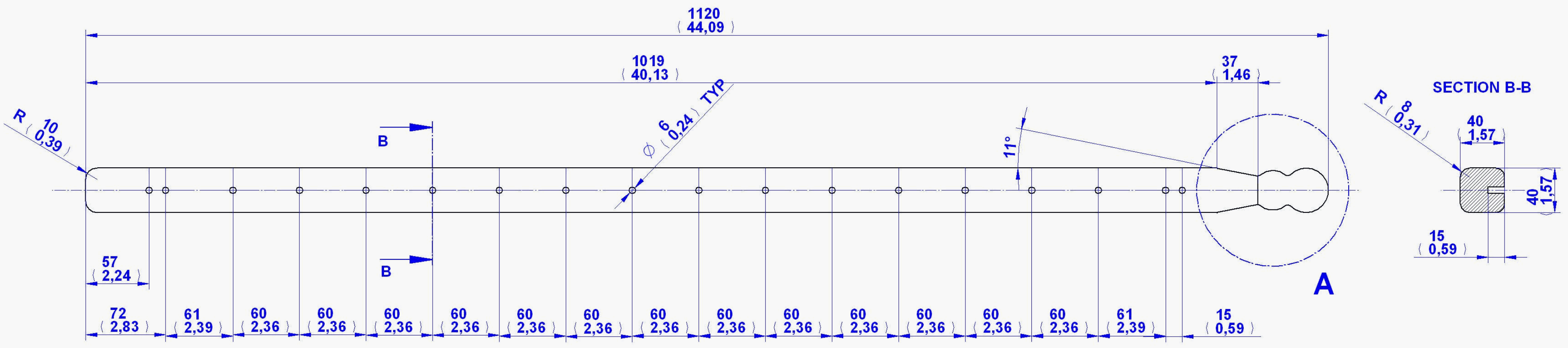

7
1
11
2
10
4
5
10
DETAIL A
13
1
12
1
DETAIL C
4
1
3
2
6
14
1
1
A
C
B
2
1
9
30
8
2
DETAIL B

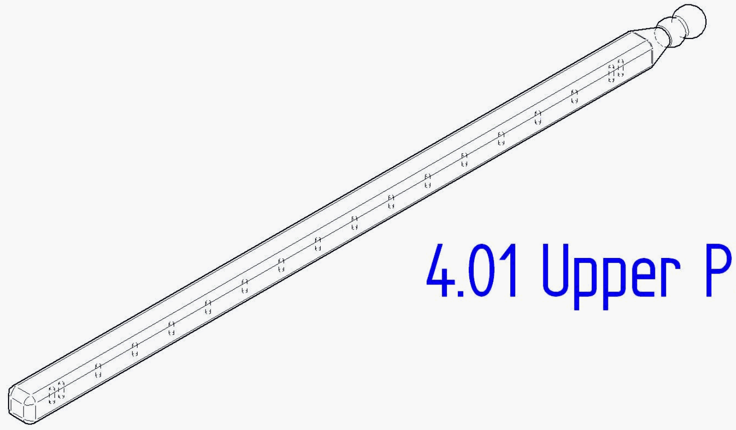
4. Side

Item Number	Title	Material	Quantity	Category
1	Upper Plank Side	Wood	1	
2	Lower Plank Side	Wood	1	
3	Circular Plank Side	Wood	2	
4	Midle Plank Side	Wood	1	
5	Pin D6 x 40mm	Wood	10	
6	Wire D6mm Side	Steel	14	
7	Back Plate Joint	Steel	1	
8	Lover Plate Side	Steel	2	
9	Tack D1,6 x 15mm	Steel	30	Standard Part
10	Leg Hinge Plate	Steel	4	
11	Leg Hinge Wire	Steel	2	
12	Front Plate Joint	Steel	1	
13	Front Ring	Steel	1	Standard Part

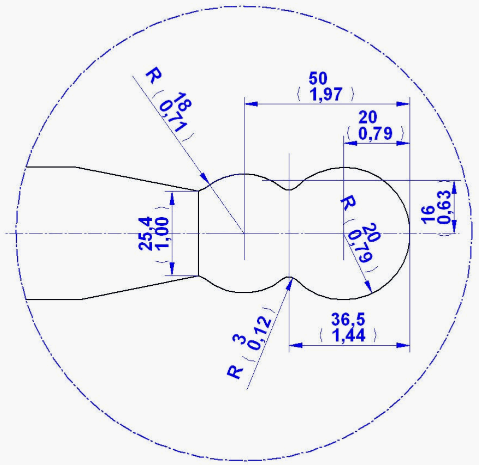
Side Subassembly Drawing


1142
(44,94)
148
(5,83)
79
(3,11)
726
(28,59)
79
(3,11)
30
(1,18)
25,5
(1,00)
360
(14,17)
127
(5,00)
40
(1,57)
40
(1,57)
A
B
4. Side
59,78
(2,35) TYP
DETAIL B
20
(0,79)
20
(0,79)
DETAIL A


1120
(44,09)
1019
(40,13)
37
(1,46)
R (10 0,39)
B
B
⌀ 6 (0,24) TYP
11°
SECTION B-B
R 8 (0,31)
40
(1,57)
40
(1,57)
15
(0,59)
57
(2,24)
A
72
(2,83)
61
(2,39)
60
(2,36)
60
(2,36)
60
(2,36)
60
(2,36)
60
(2,36)
60
(2,36)
60
(2,36)
60
(2,36)
60
(2,36)
60
(2,36)
60
(2,36)
60
(2,36)
60
(2,36)
61
(2,39)
15
(0,59)

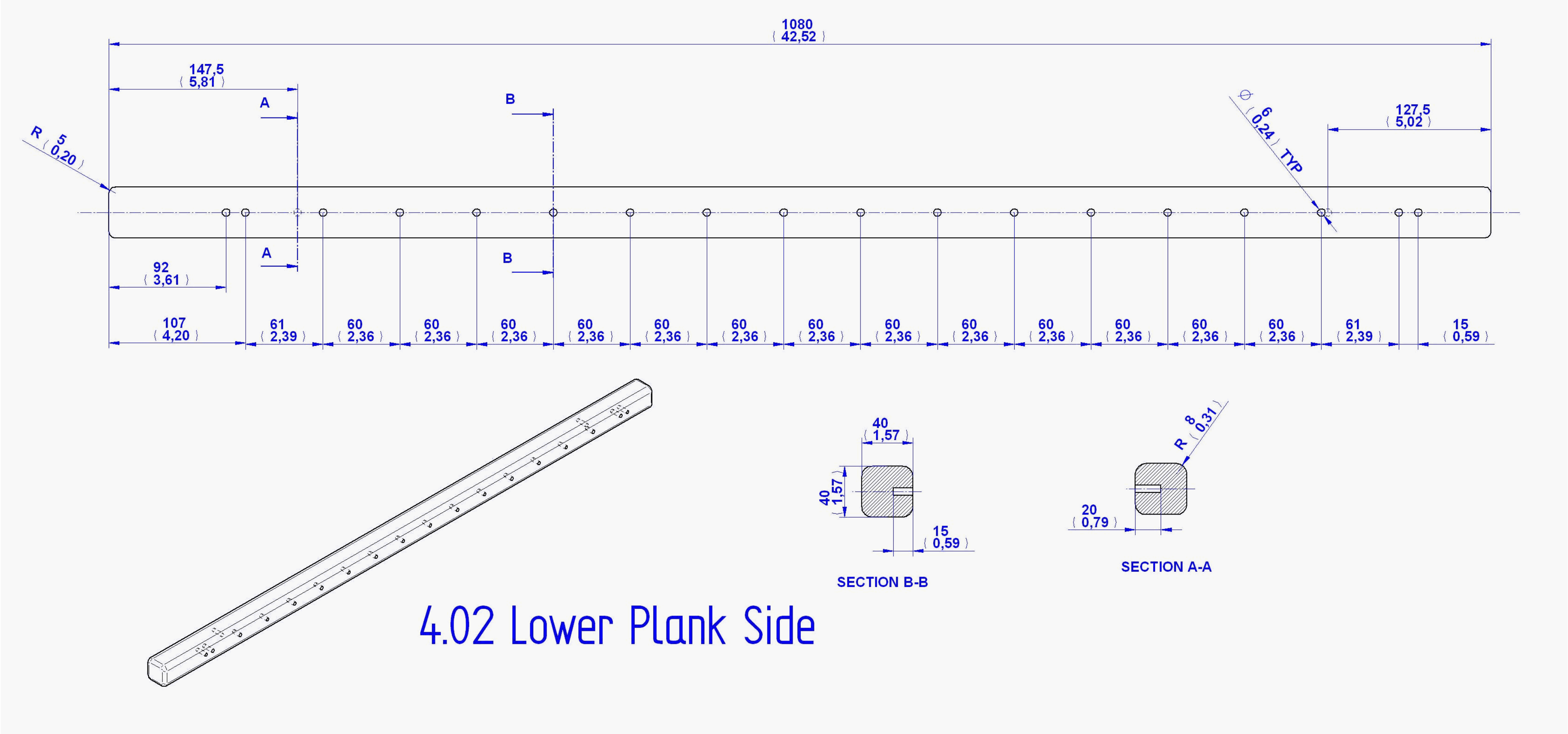


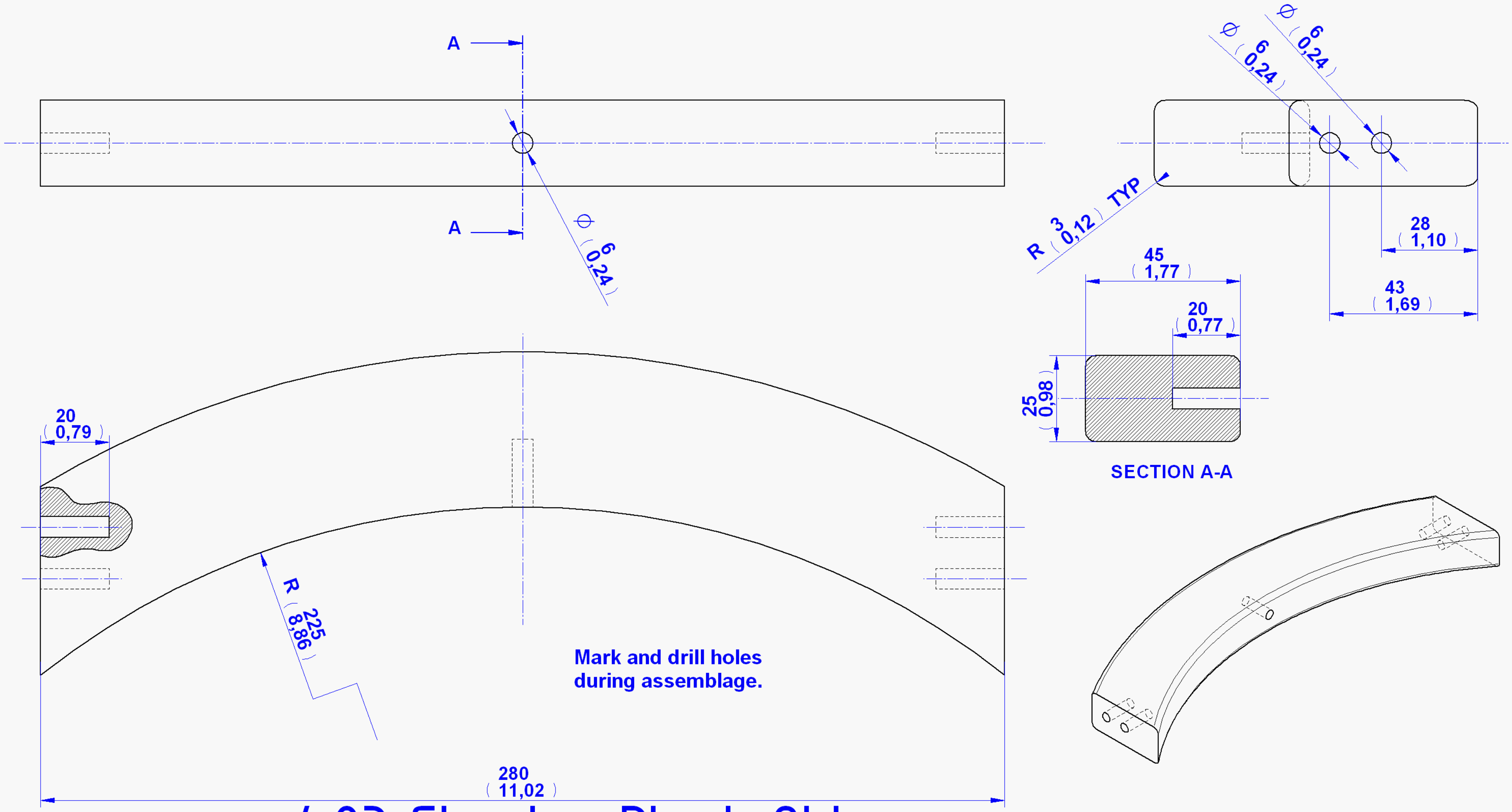
4.01 Upper Plank Side


R 18 (0,71)
50
(1,97)
20
(0,79)
25,4
(1,00)
R 20 (0,79)
16
(0,63)
R 3 (0,12)
36,5
(1,44)

DETAIL A

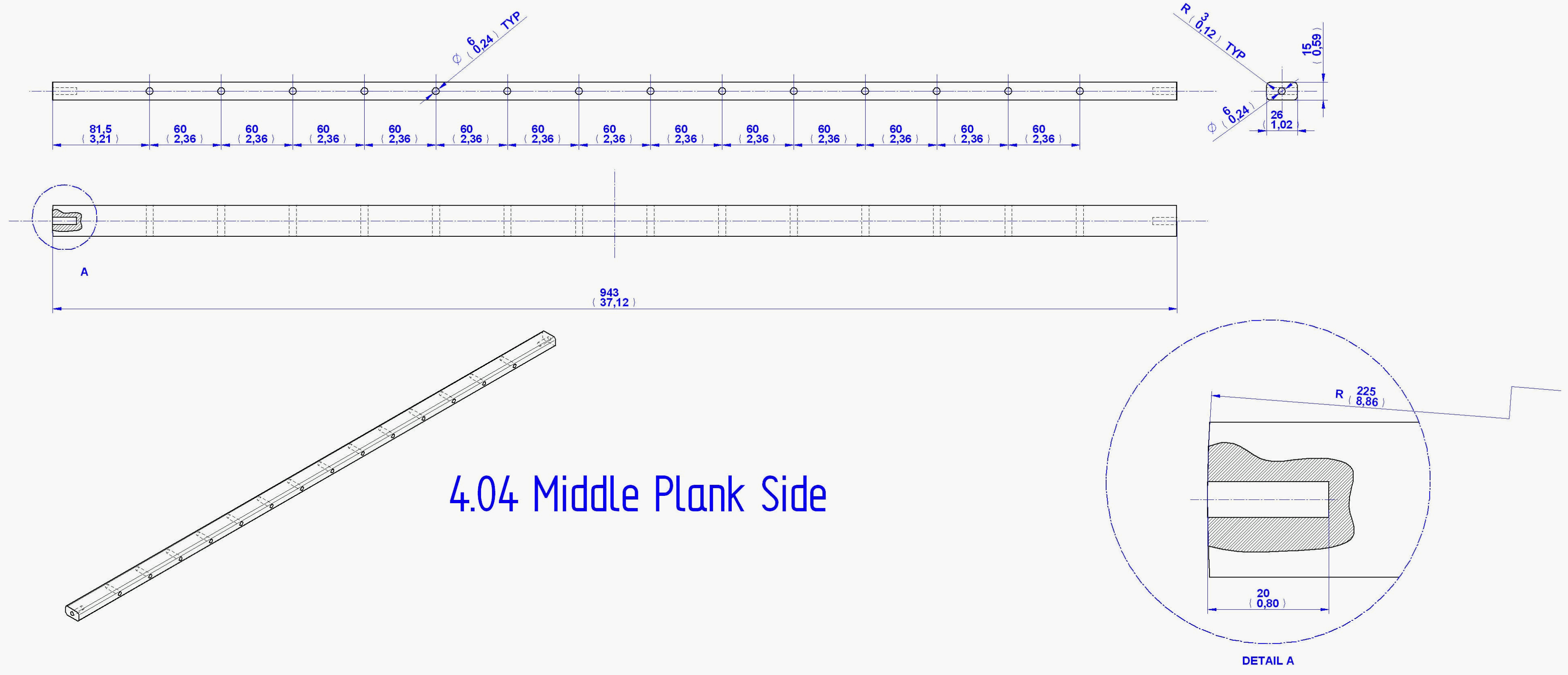
4.02 Lower Plank Side


1080
(42,52)
147,5
(5,81)
A
B
R (5 0,20)
⌀ 6 (0,24) TYP
127,5
(5,02)
92
(3,61)
A
B
107
(4,20)
61
(2,39)
60
(2,36)
60
(2,36)
60
(2,36)
60
(2,36)
60
(2,36)
60
(2,36)
60
(2,36)
60
(2,36)
60
(2,36)
60
(2,36)
60
(2,36)
60
(2,36)
60
(2,36)
61
(2,39)
15
(0,59)
40
(1,57)
40
(1,57)
15
(0,59)
SECTION B-B
R 8 (0,31)
20
(0,79)
SECTION A-A

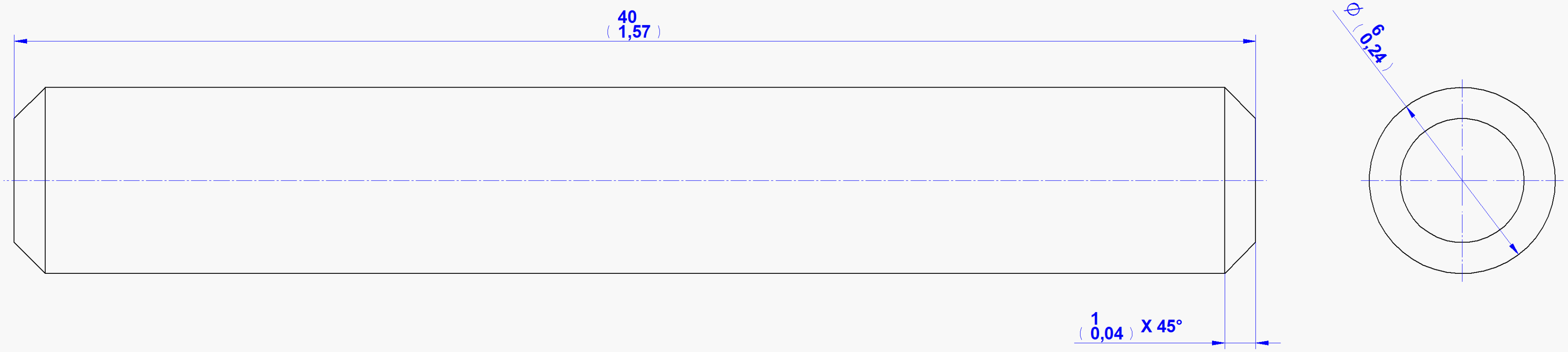

A
A
⌀ 6 (0,24)
⌀ 6 (0,24)
⌀ 6 (0,24)
R 3 (0,12) TYP
28 (1,10)
45 (1,77)
43 (1,69)
20 (0,77)
25 (0,98)
SECTION A-A
20 (0,79)
R 225 (8,86)
280 (11,02)

Mark and drill holes during assemblage.

4.03 Circular Plank Side

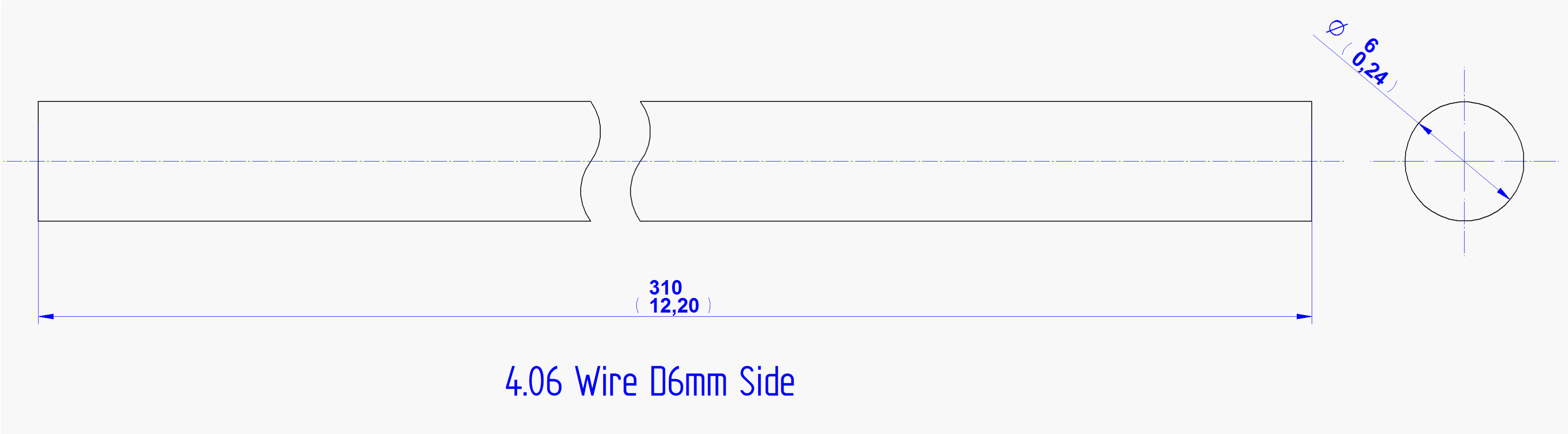

Φ 6 (0,24) TYP
R 3 (0,12) TYP
15 (0,59)
Φ 6 (0,24)
26 (1,02)
81,5 (3,21)
60 (2,36)
60 (2,36)
60 (2,36)
60 (2,36)
60 (2,36)
60 (2,36)
60 (2,36)
60 (2,36)
60 (2,36)
60 (2,36)
60 (2,36)
60 (2,36)
60 (2,36)
A
943 (37,12)
R 225 (8,86)
20 (0,80)
DETAIL A

4.04 Middle Plank Side

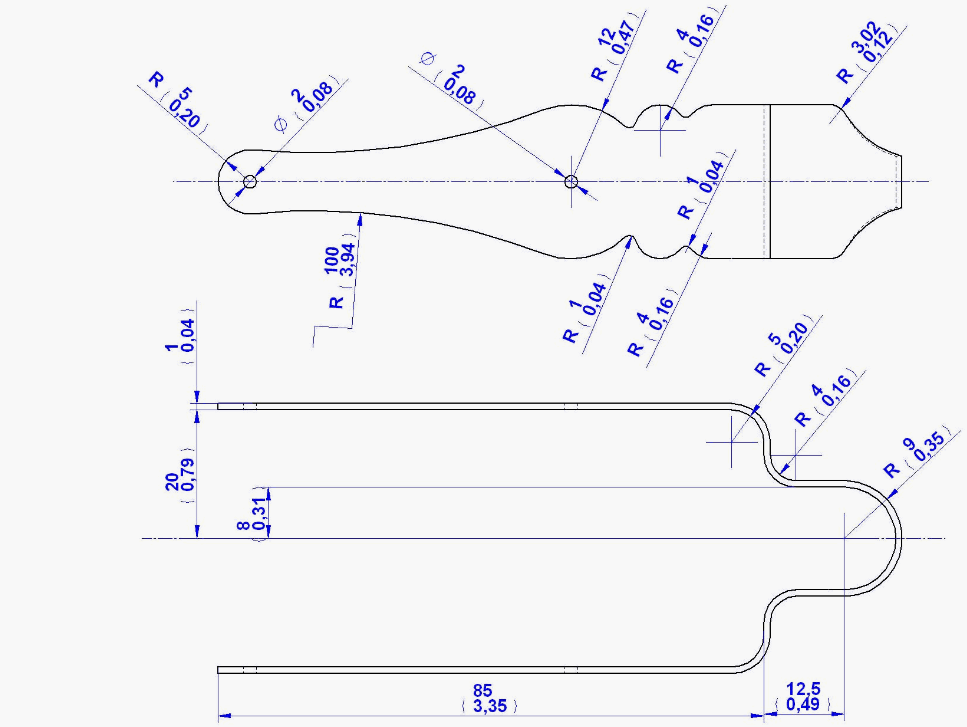

40
(1,57)
Φ 6
(0,24)
1
(0,04) X 45°

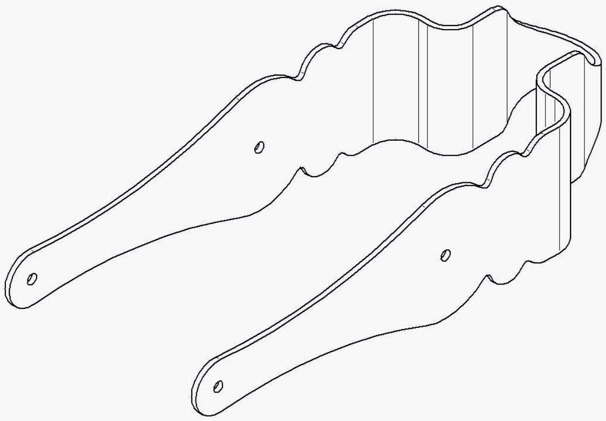
3.04 Pin D6 x 40mm

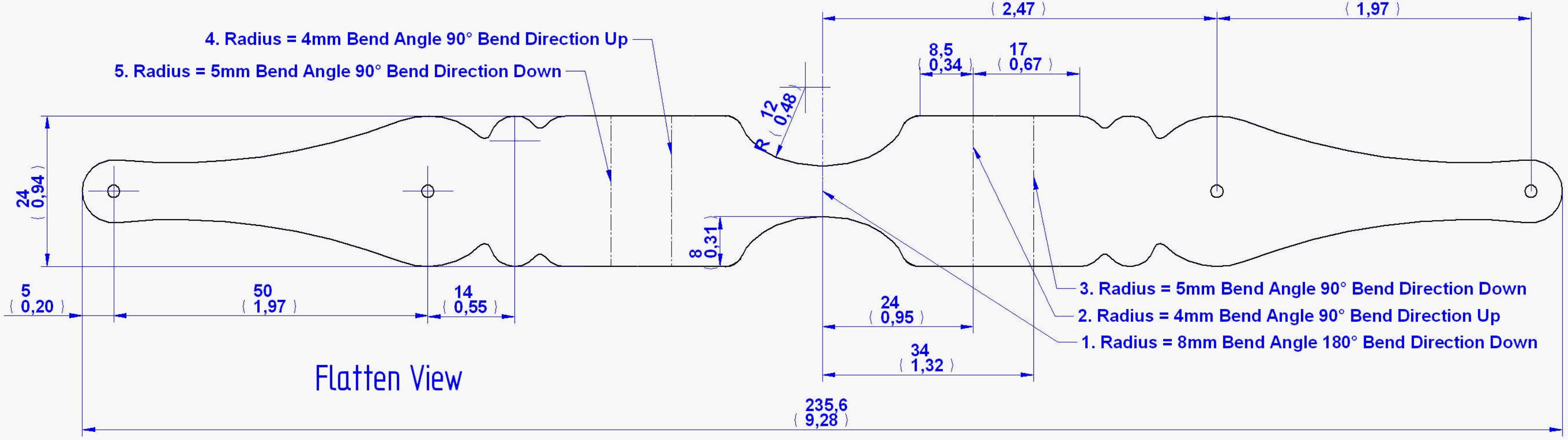
4.05 Pin D6 x 40mm


∅ 6
(0,24)
310
(12,20)
4.06 Wire D6mm Side

4.07 Back Plate Joint


R 5 (0,20)
⌀ 2 (0,08)
⌀ 2 (0,08)
R 12 (0,47)
R 4 (0,16)
R 3,02 (0,12)
R 1 (0,04)
R 100 (3,94)
R 1 (0,04)
R 4 (0,16)
1 (0,04)
20 (0,79)
8 (0,31)
R 5 (0,20)
R 4 (0,16)
R 9 (0,35)
85 (3,35)
12,5 (0,49)

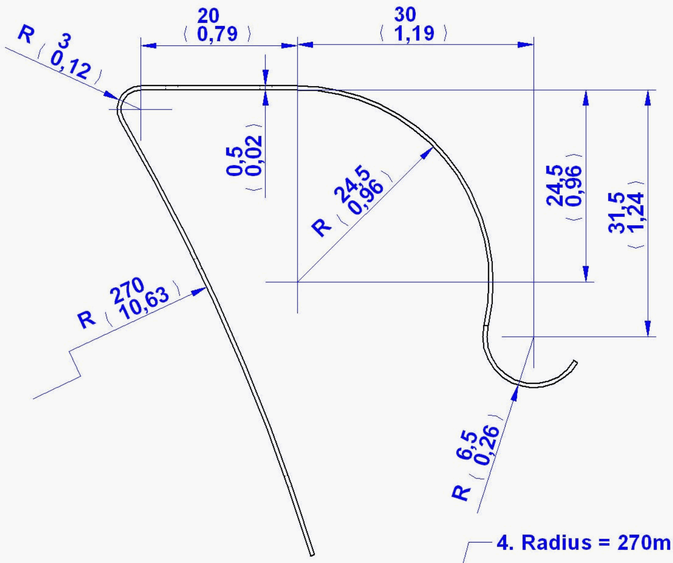


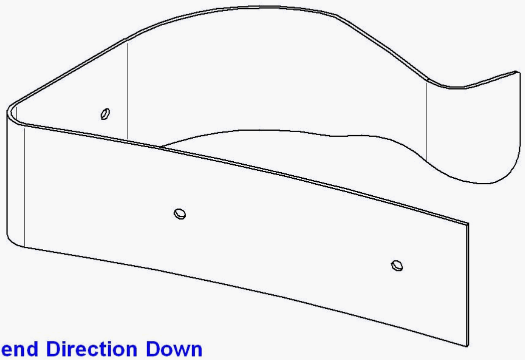

63 (2,47)
50 (1,97)
8,5 (0,34)
17 (0,67)
R 12 (0,48)
24 (0,94)
8 (0,31)
5 (0,20)
50 (1,97)
14 (0,55)
24 (0,95)
34 (1,32)
235,6 (9,28)

4. Radius = 4mm Bend Angle 90° Bend Direction Up
5. Radius = 5mm Bend Angle 90° Bend Direction Down
3. Radius = 5mm Bend Angle 90° Bend Direction Down
2. Radius = 4mm Bend Angle 90° Bend Direction Up
1. Radius = 8mm Bend Angle 180° Bend Direction Down

Flatten View

4.08 Lower Plate Side


R 3 (0,12)
20 (0,79)
30 (1,19)
0,5 (0,02)
R 24,5 (0,96)
24,5 (0,96)
31,5 (1,24)
R 270 (10,63)
R 6,5 (0,26)

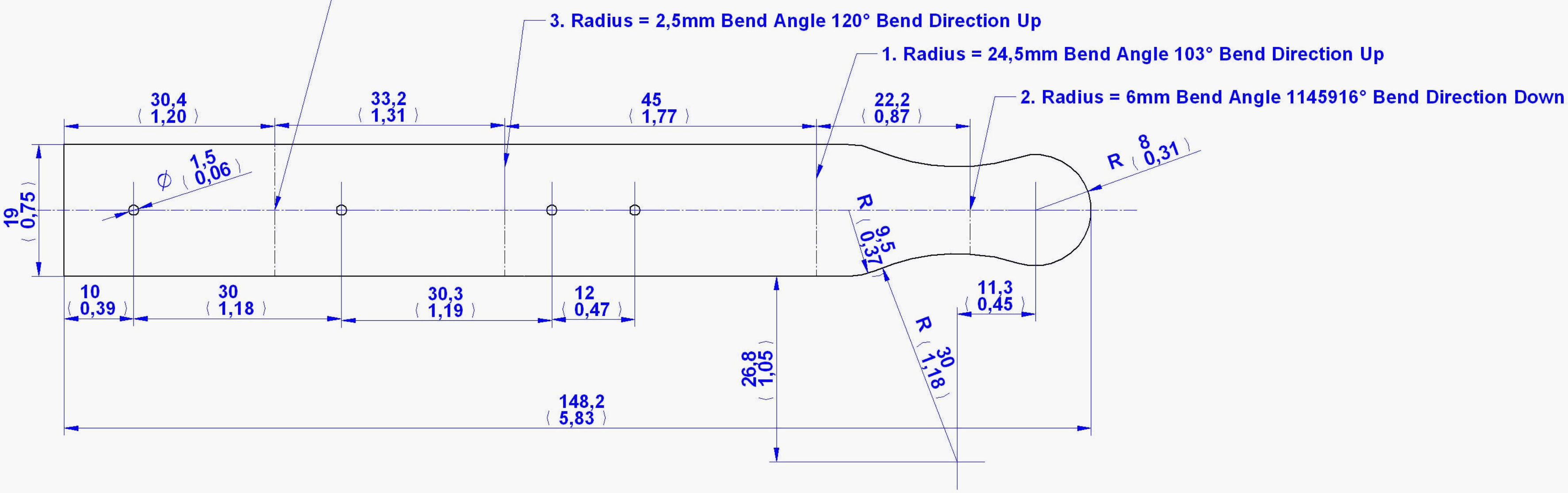


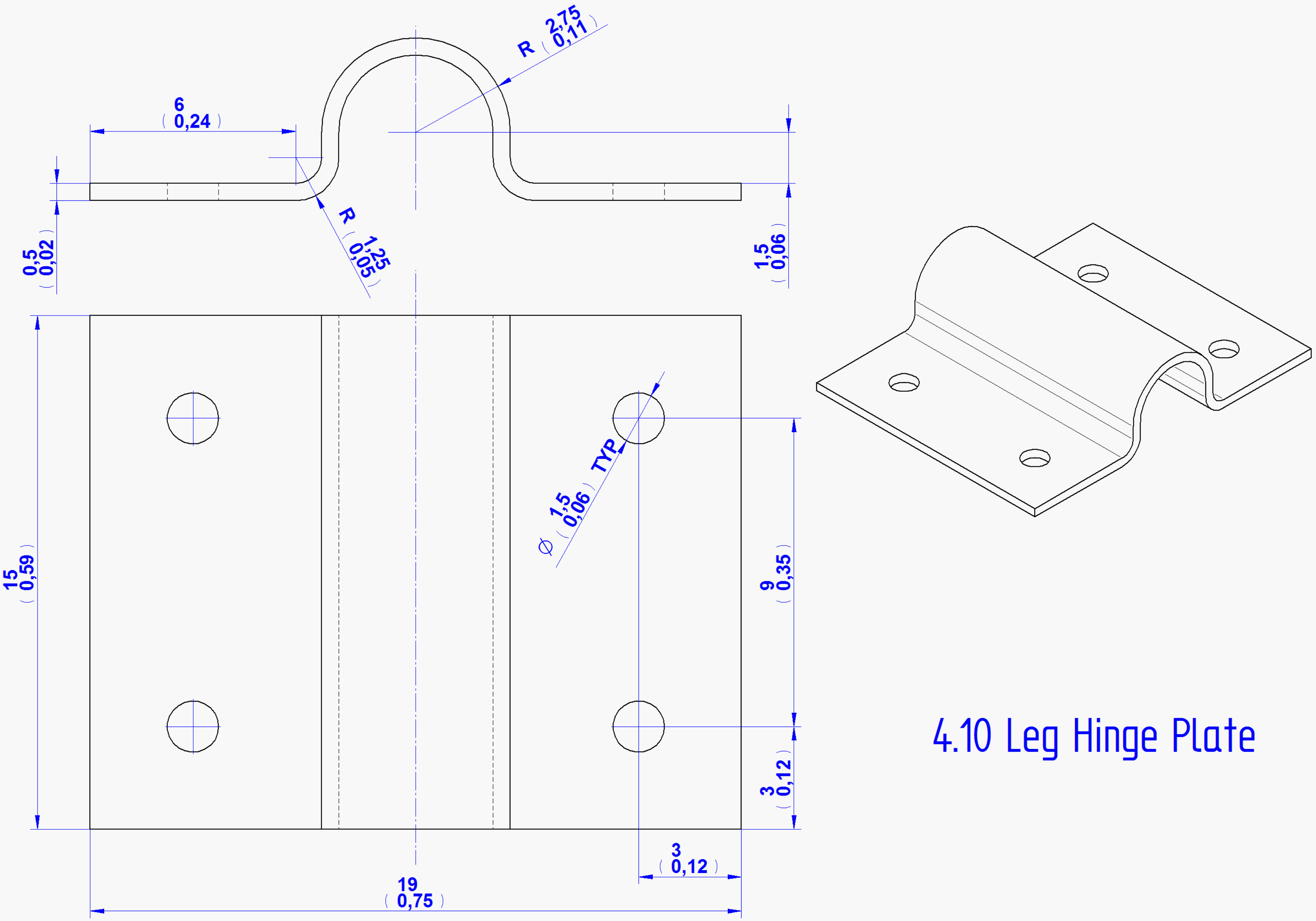
4. Radius = 270mm Bend Angle 13° Bend Direction Down

3. Radius = 2,5mm Bend Angle 120° Bend Direction Up

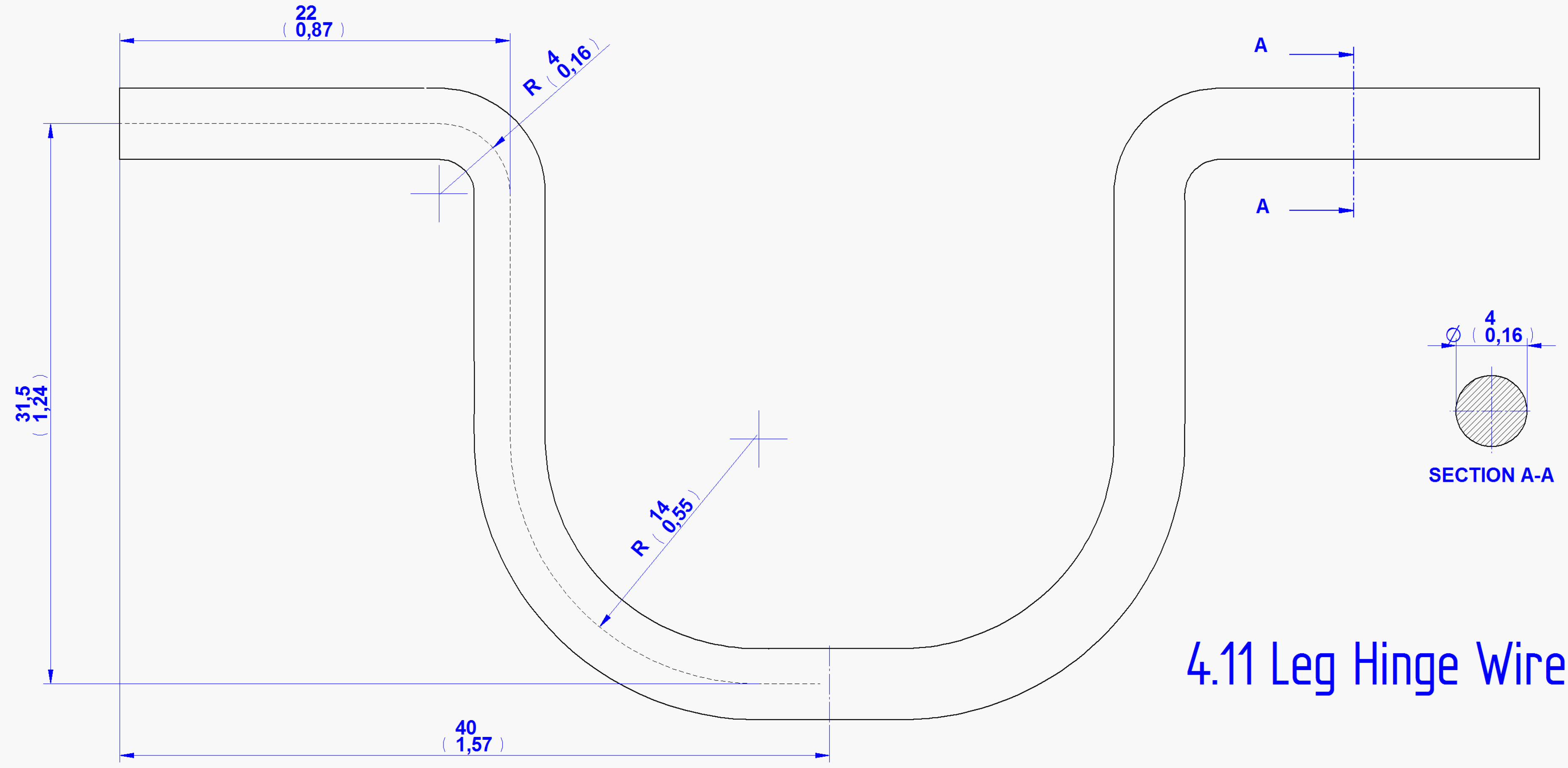
1. Radius = 24,5mm Bend Angle 103° Bend Direction Up

2. Radius = 6mm Bend Angle 1145916° Bend Direction Down


30,4 (1,20)
33,2 (1,31)
45 (1,77)
22,2 (0,87)
R 8 (0,31)
⌀ 1,5 (0,06)
19 (0,75)
R 9,5 (0,37)
10 (0,39)
30 (1,18)
30,3 (1,19)
12 (0,47)
11,3 (0,45)
26,8 (1,05)
R 30 (1,18)
148,2 (5,83)

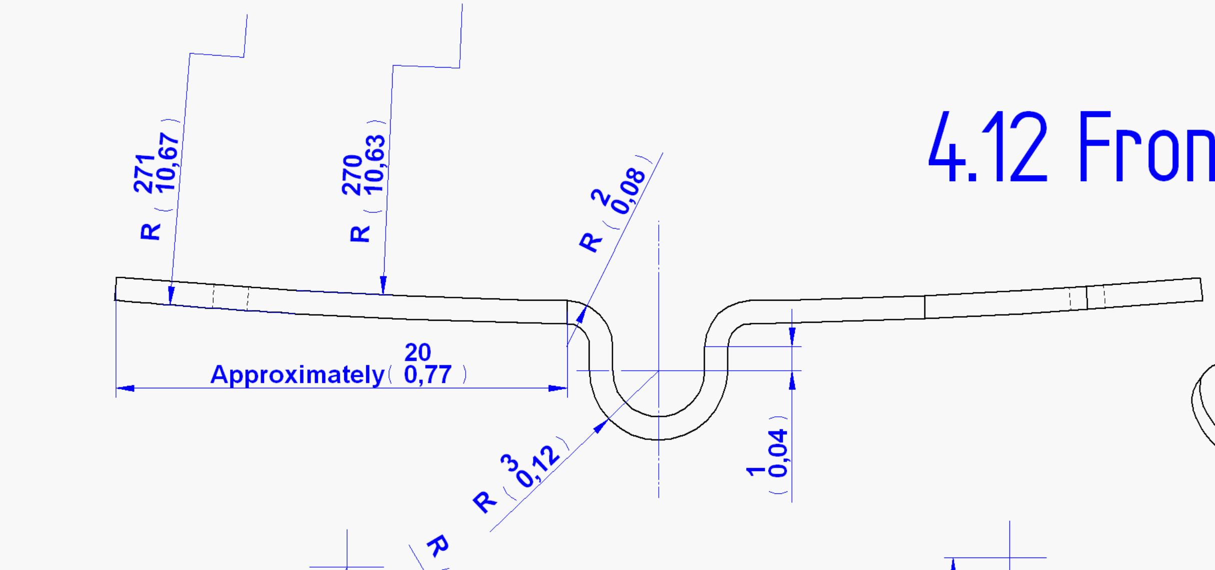

R 2,75 (0,11)
6 (0,24)
0,5 (0,02)
R 1,25 (0,05)
1,5 (0,06)
15 (0,59)
∅ 1,5 (0,06) TYP
9 (0,35)
3 (0,12)
3 (0,12)
19 (0,75)

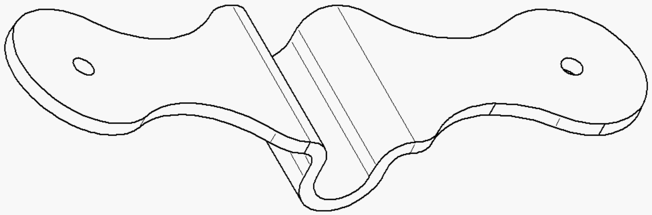
4.10 Leg Hinge Plate

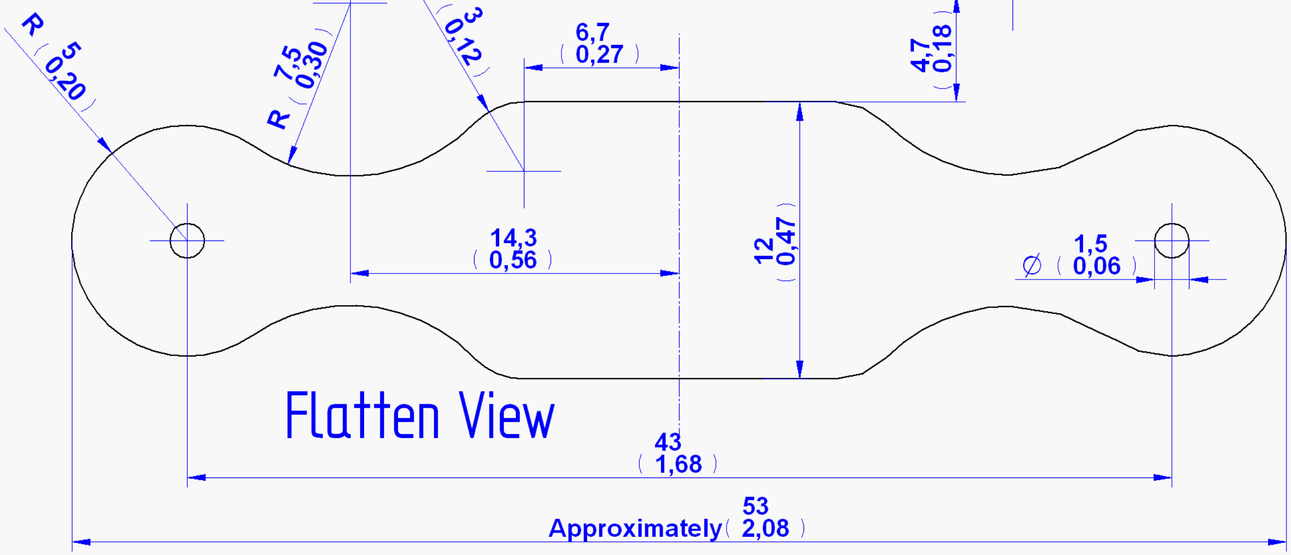

22
(0,87)
R 4 (0,16)
31,5 (1,24)
R 14 (0,55)
40 (1,57)
A
A
∅ 4 (0,16)
SECTION A-A

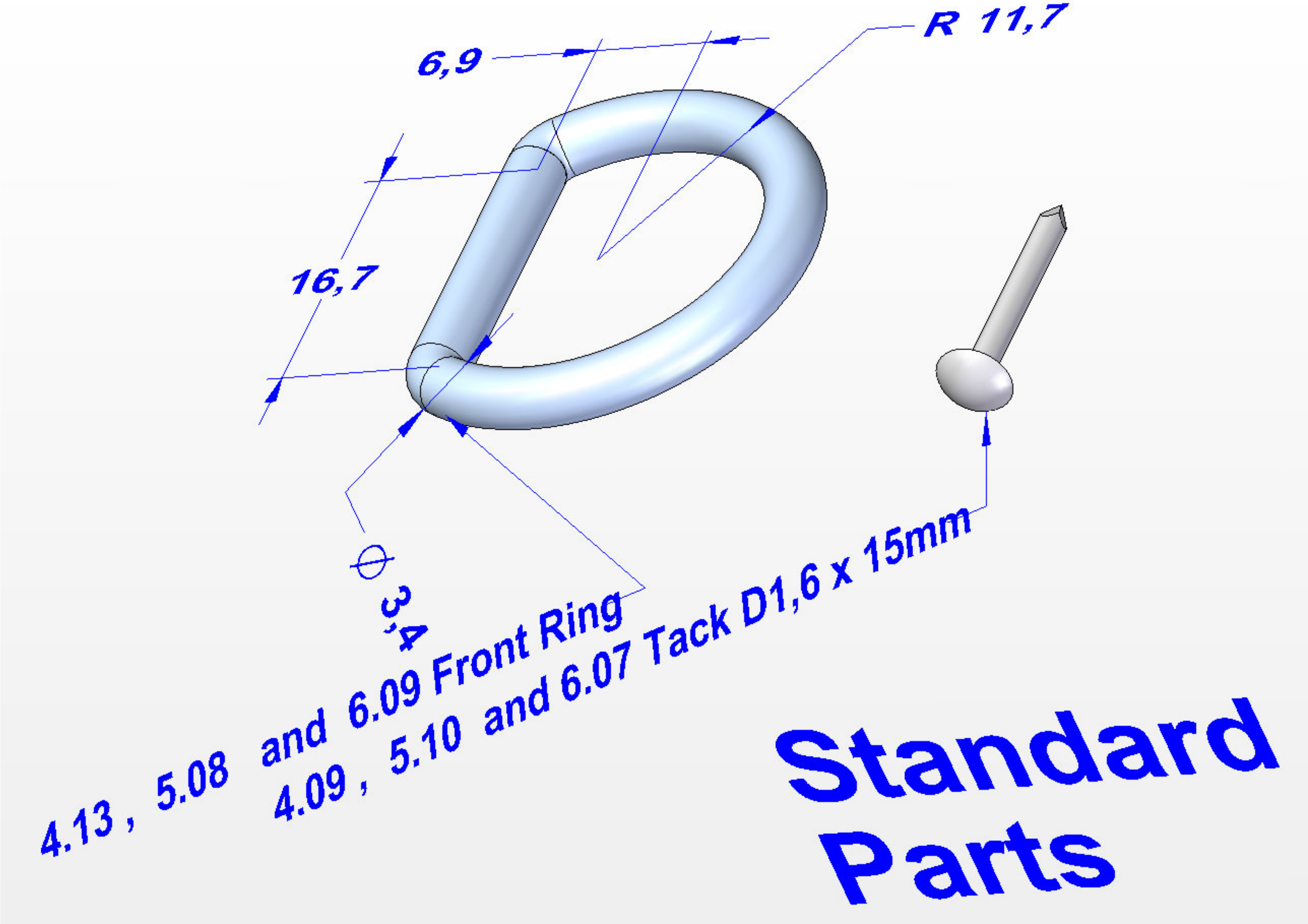
4.11 Leg Hinge Wire

4.12 Front Plate Joint

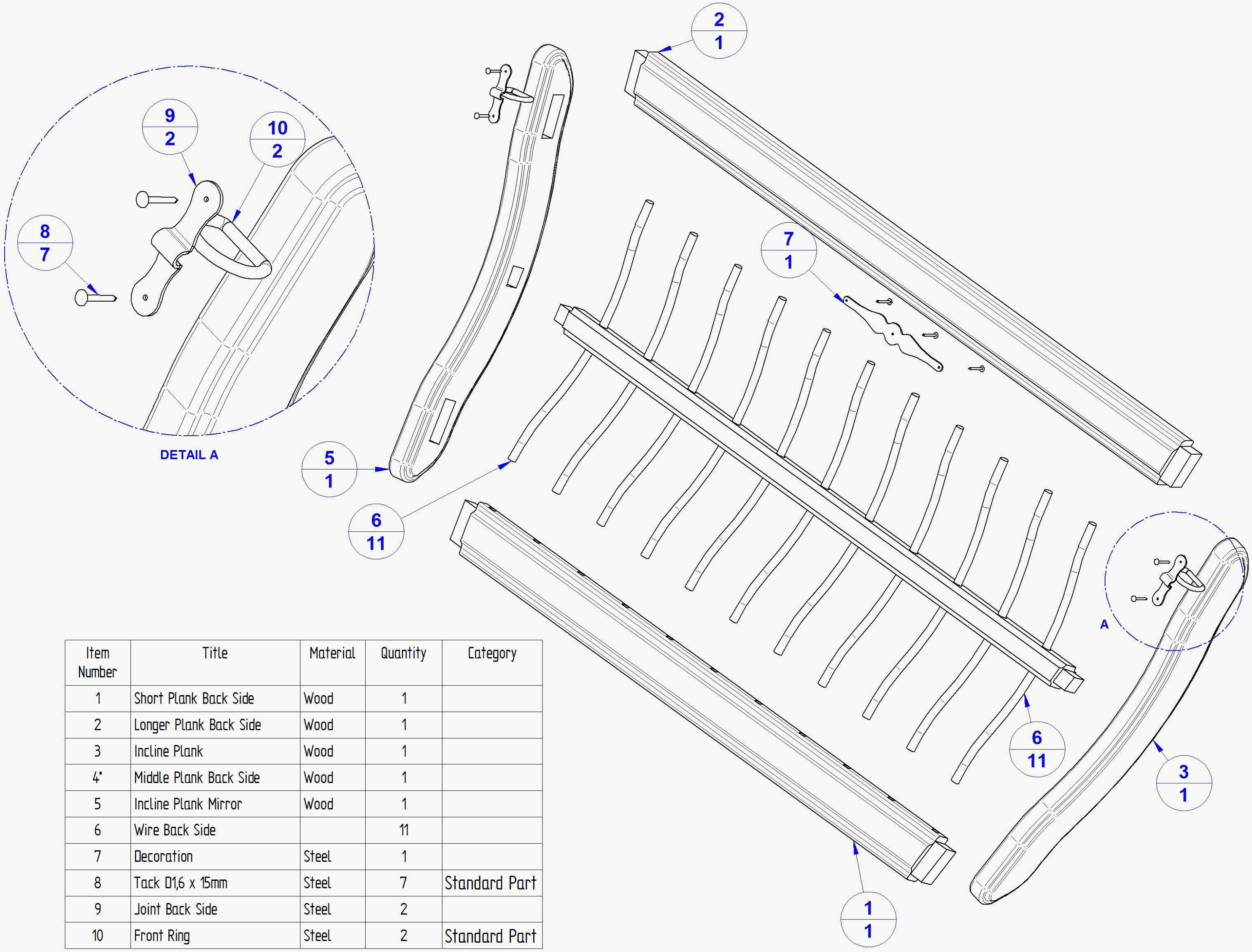

R 271 (10,67)
R 270 (10,63)
R 2 (0,08)
20
Approximately (0,77)
R 3 (0,12)
1 (0,04)




R 5 (0,20)
R 7,5 (0,30)
R 3 (0,12)
6,7 (0,27)
4,7 (0,18)
14,3 (0,56)
12 (0,47)
∅ 1,5 (0,06)
Flatten View
43 (1,68)
53
Approximately (2,08)

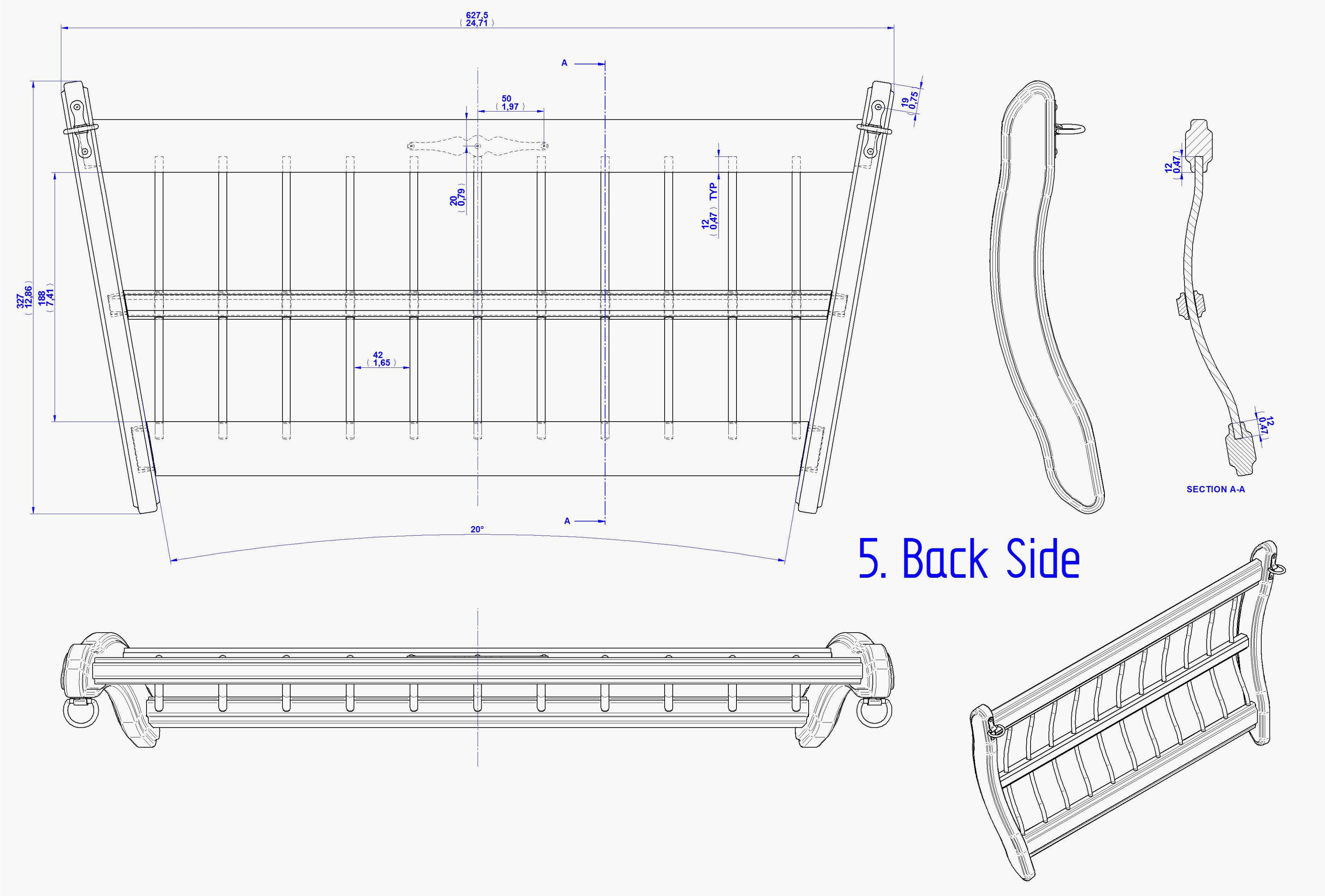

6,9
R 11,7
16,7
Ø 3,4
4.13 , 5.08 and 6.09 Front Ring
4.09 , 5.10 and 6.07 Tack D1,6 x 15mm
Standard
Parts

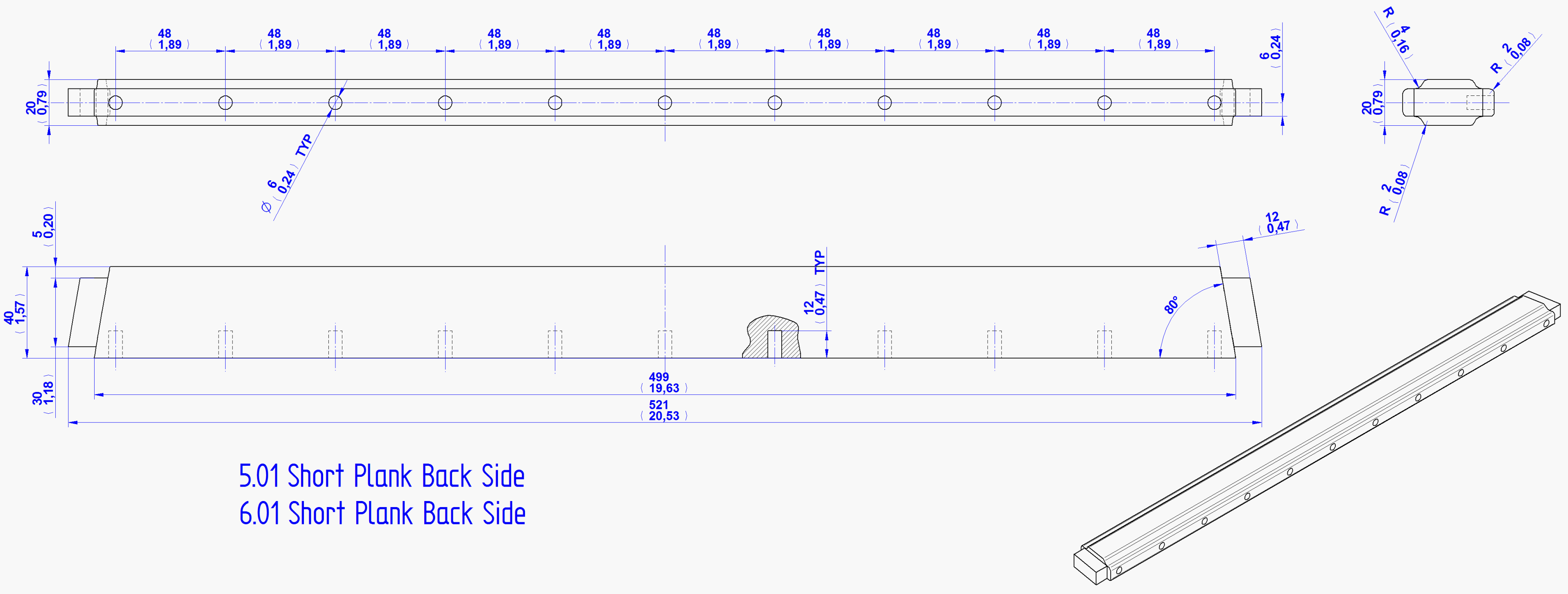
5. Back Side Subassembly
Parts List



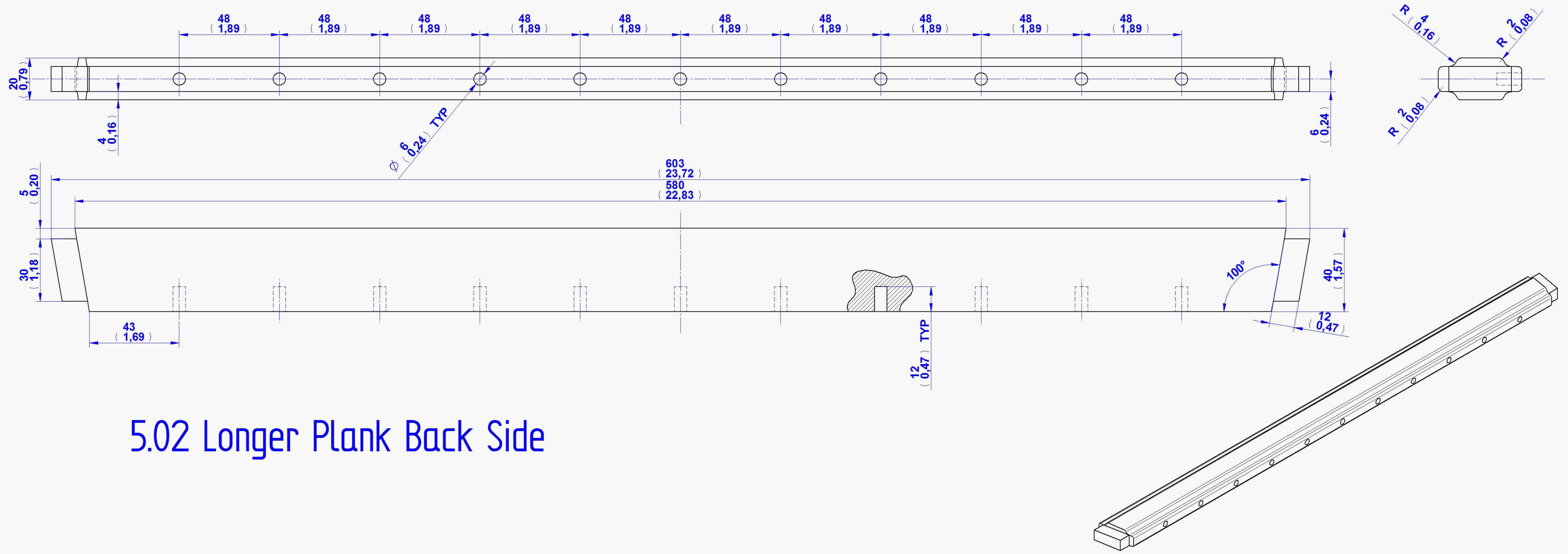
Item Number	Title	Material	Quantity	Category
1	Short Plank Back Side	Wood	1	
2	Longer Plank Back Side	Wood	1	
3	Incline Plank	Wood	1	
4*	Middle Plank Back Side	Wood	1	
5	Incline Plank Mirror	Wood	1	
6	Wire Back Side		11	
7	Decoration	Steel	1	
8	Tack D1,6 x 15mm	Steel	7	Standard Part
9	Joint Back Side	Steel	2	
10	Front Ring	Steel	2	Standard Part

Back Side Subassembly Drawing


627,5
(24,71)
A
50
(1,97)
19
(0,75)
20
(0,79)
TYP
12
(0,47)
327
(12,86)
188
(7,41)
42
(1,65)
20°
A
12
(0,47)
12
(0,47)
SECTION A-A
5. Back Side

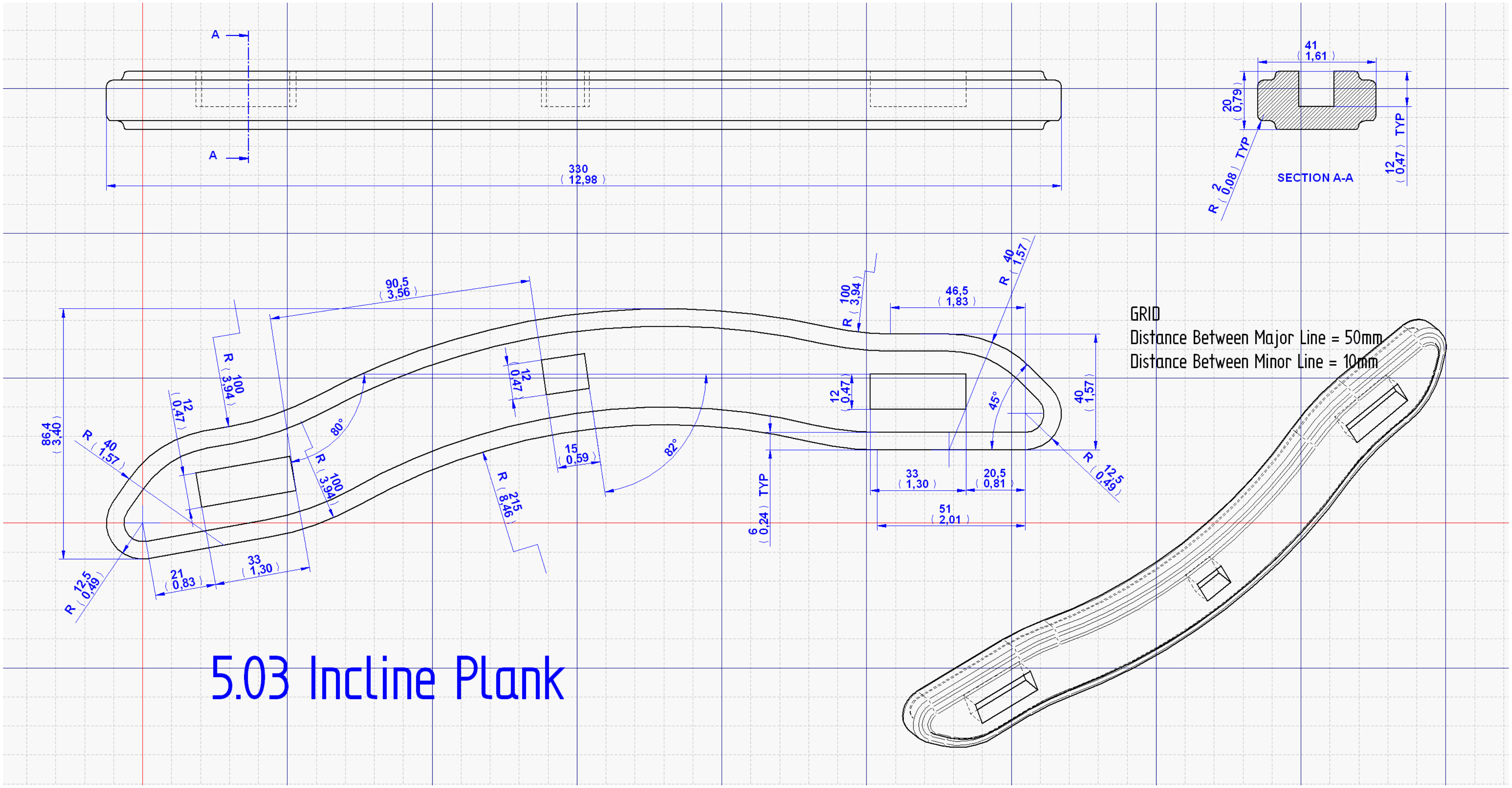

48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
6 (0,24)
20 (0,79)
Ø 6 (0,24) TYP
R 4 (0,16)
R 2 (0,08)
20 (0,79)
R 2 (0,08)
5 (0,20)
40 (1,57)
30 (1,18)
12 (0,47) TYP
80°
12 (0,47)
499 (19,63)
521 (20,53)

5.01 Short Plank Back Side
6.01 Short Plank Back Side

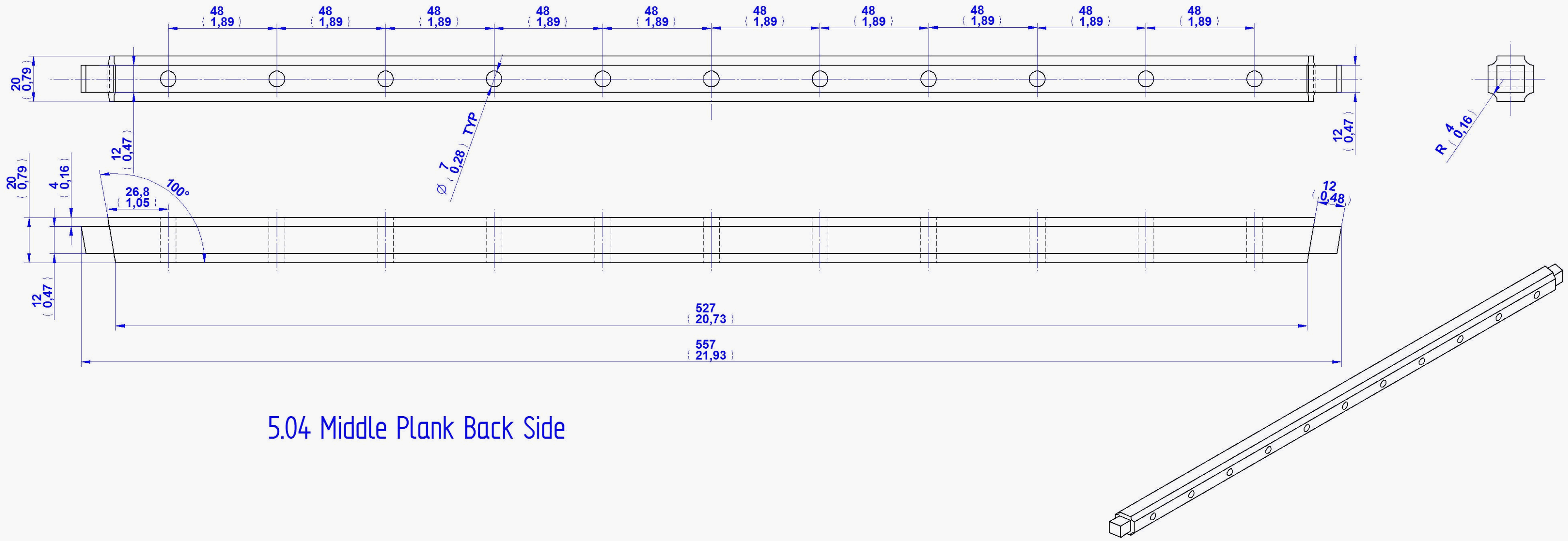

48 (1,89)
20 (0,79)
4 (0,16)
∅ 6 (0,24) TYP
6 (0,24)
R 4 (0,16)
R 2 (0,08)
R 2 (0,08)
603 (23,72)
580 (22,83)
5 (0,20)
30 (1,18)
43 (1,69)
100°
40 (1,57)
12 (0,47)
12 (0,47) TYP

5.02 Longer Plank Back Side

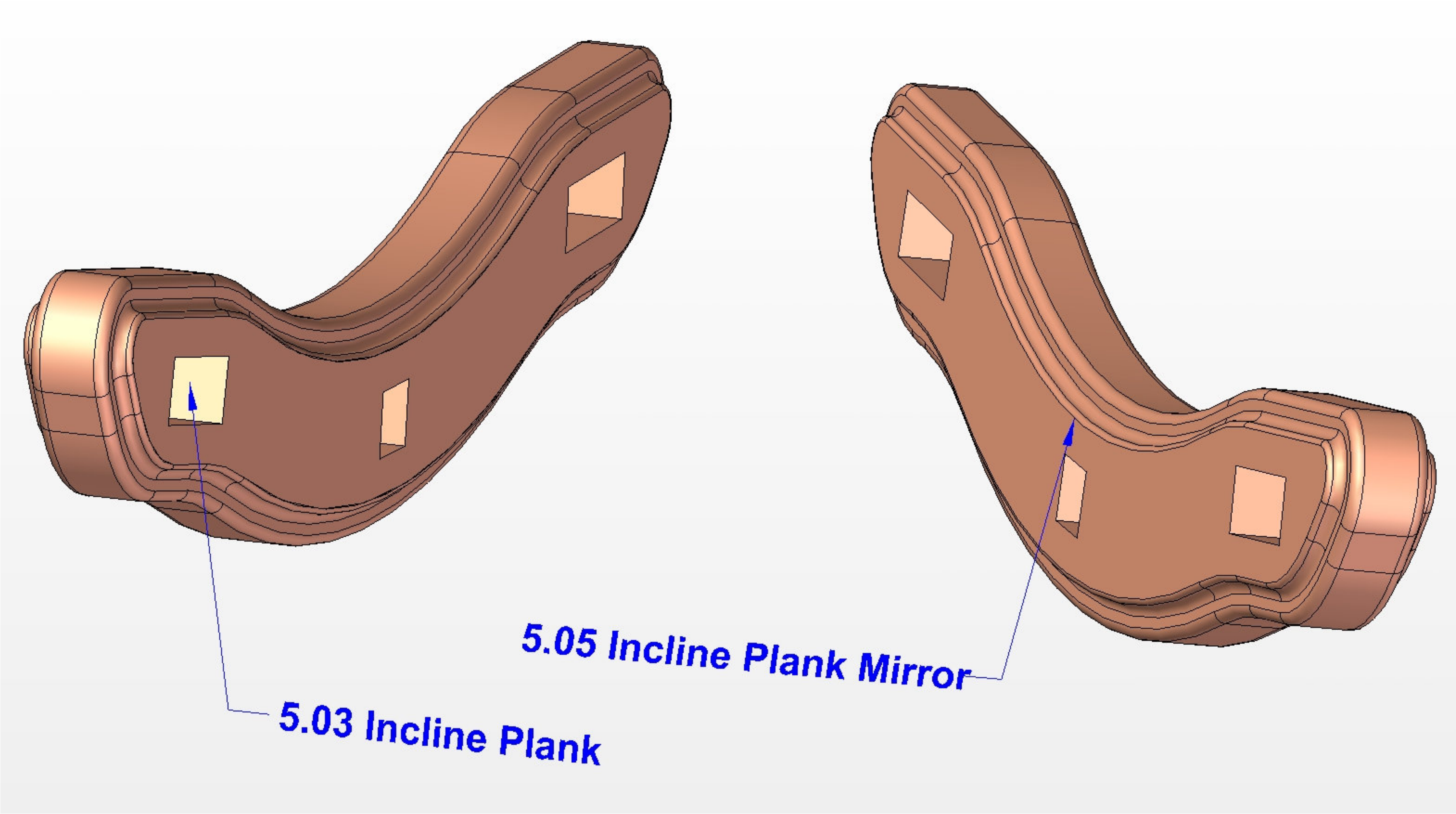
5.03 Incline Plank


A
A
330
(12,98)
41
(1,61)
20
(0,79)
R 2 (0,08) TYP
12 (0,47) TYP
SECTION A-A
90,5
(3,56)
R 100 (3,94)
12 (0,47)
86,4 (3,40)
R 40 (1,57)
80°
R 100 (3,94)
12 (0,47)
15 (0,59)
82°
R 215 (8,46)
21 (0,83)
33 (1,30)
R 12,5 (0,49)
6 (0,24) TYP
R 100 (3,94)
46,5 (1,83)
R 40 (1,57)
12 (0,47)
45°
40 (1,57)
R 12,5 (0,49)
33 (1,30)
20,5 (0,81)
51 (2,01)

GRID
Distance Between Major Line = 50mm
Distance Between Minor Line = 10mm

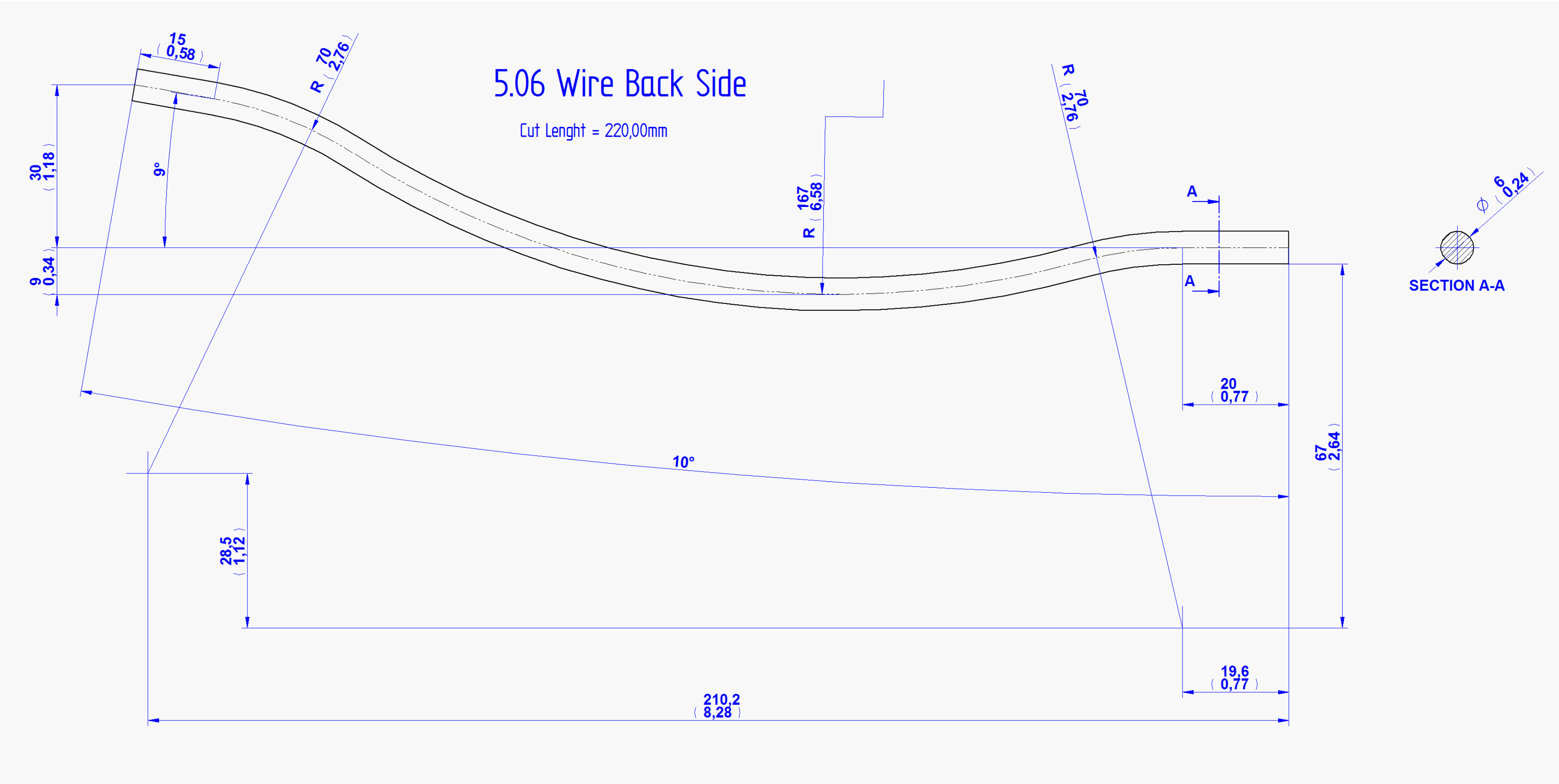

48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
20 (0,79)
12 (0,47)
∅ 7 (0,28) TYP
12 (0,47)
R 4 (0,16)
20 (0,79)
4 (0,16)
26,8 (1,05)
100°
12 (0,48)
12 (0,47)
527 (20,73)
557 (21,93)

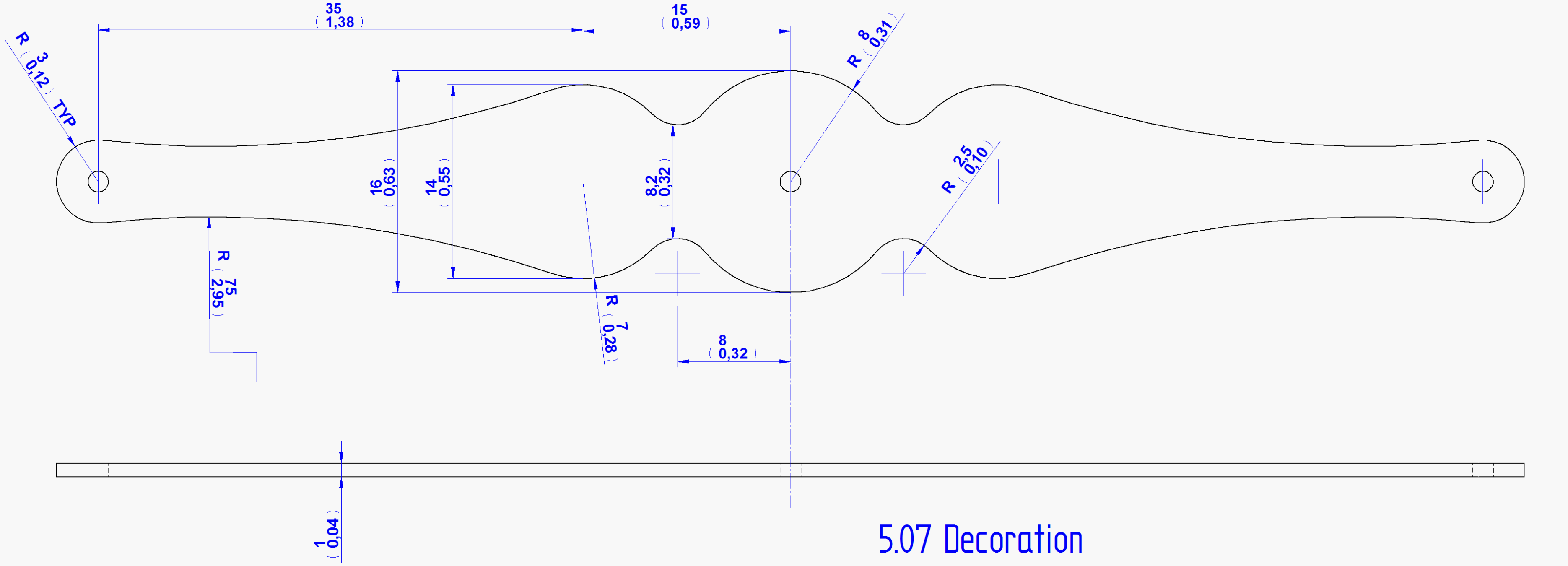
5.04 Middle Plank Back Side


5.05 Incline Plank Mirror
5.03 Incline Plank

5.06 Wire Back Side

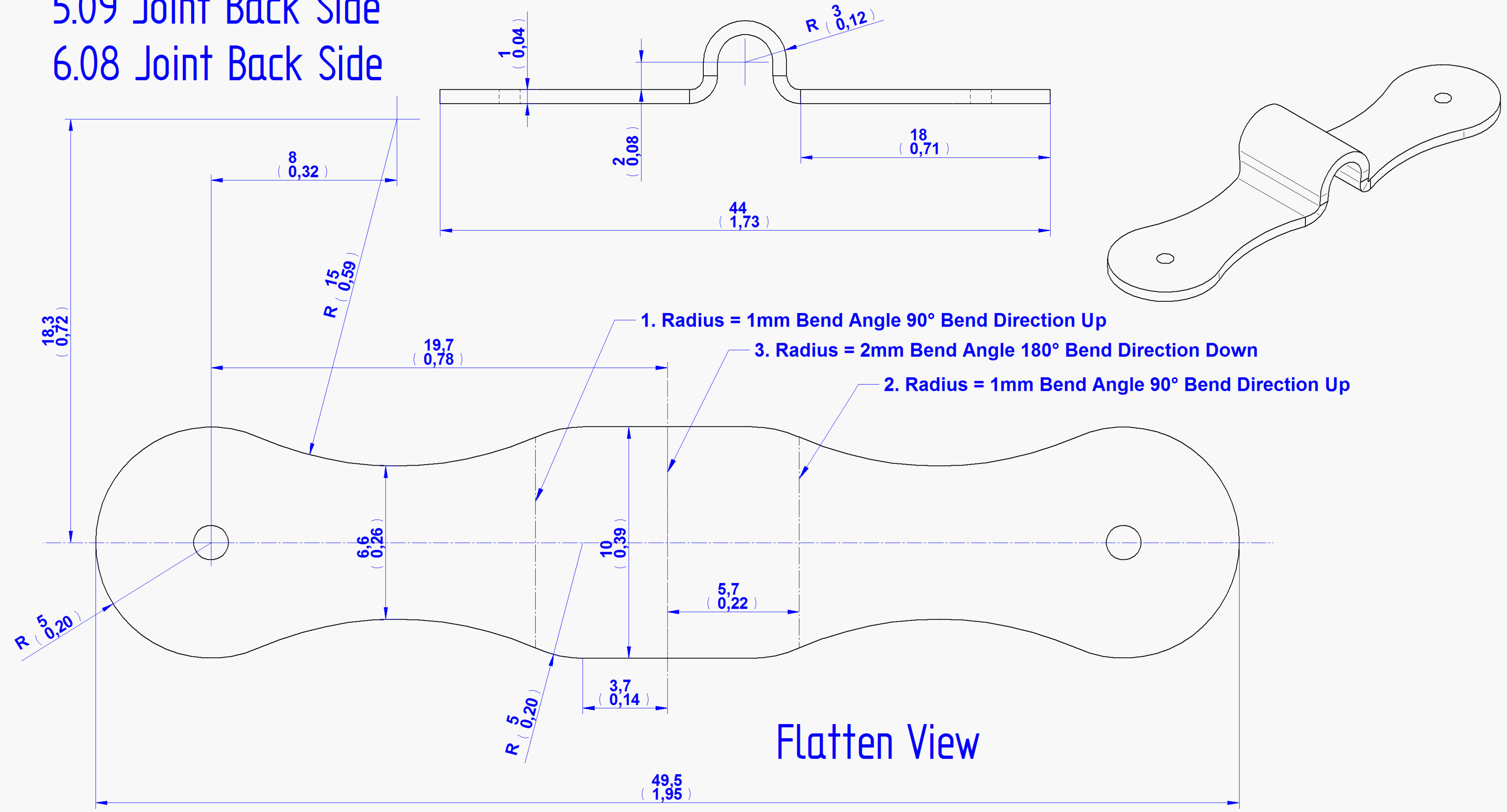
Cut Lenght = 220,00mm


15
(0,58)
R 70
(2,76)
30
(1,18)
9°
9
(0,34)
R 167
(6,58)
R 70
(2,76)
A
A
⌀ 6
(0,24)
SECTION A-A
20
(0,77)
10°
67
(2,64)
28,5
(1,12)
19,6
(0,77)
210,2
(8,28)


R 3 (0,12) TYP
35 (1,38)
15 (0,59)
R 8 (0,31)
16 (0,63)
14 (0,55)
8,2 (0,32)
R 2,5 (0,10)
R 75 (2,95)
R 7 (0,28)
8 (0,32)
1 (0,04)

5.07 Decoration
6.06 Decoration

5.09 Joint Back Side
6.08 Joint Back Side

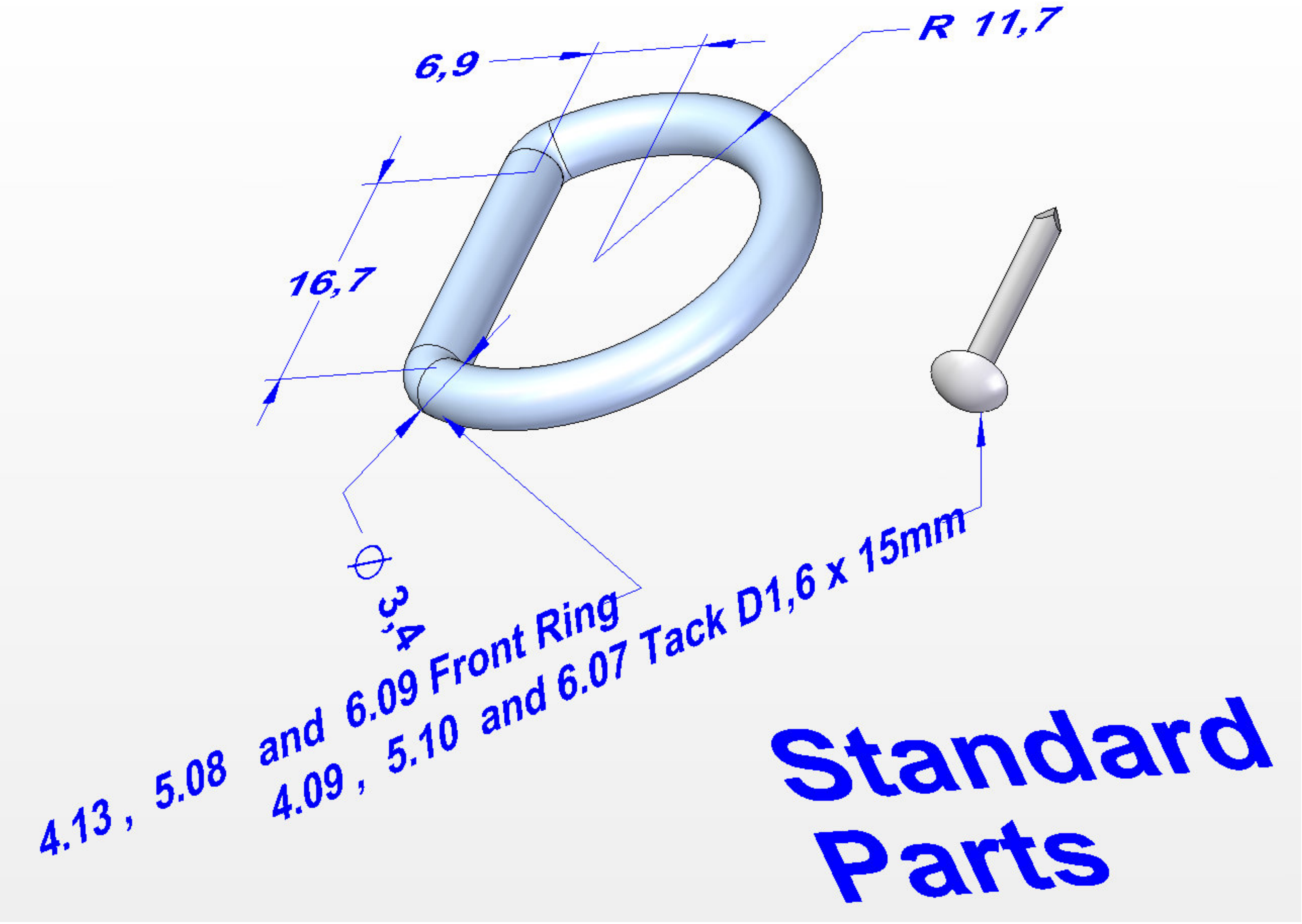

R 3 (0,12)
1 (0,04)
2 (0,08)
18 (0,71)
44 (1,73)
8 (0,32)
R 15 (0,59)
18,3 (0,72)
19,7 (0,78)
6,6 (0,26)
10 (0,39)
5,7 (0,22)
3,7 (0,14)
R 5 (0,20)
R 5 (0,20)
49,5 (1,95)

1. Radius = 1mm Bend Angle 90° Bend Direction Up

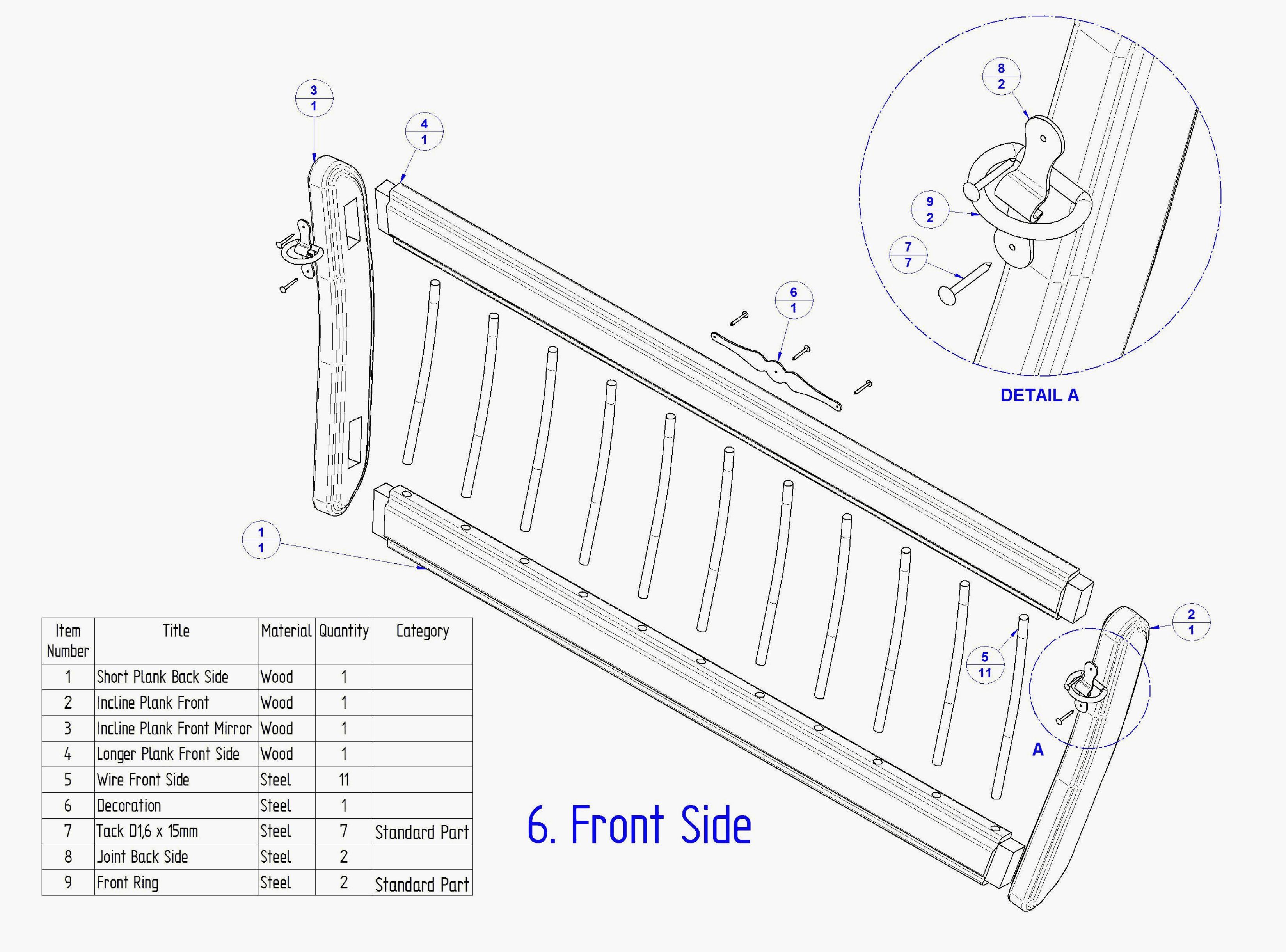
3. Radius = 2mm Bend Angle 180° Bend Direction Down

2. Radius = 1mm Bend Angle 90° Bend Direction Up

Flatten View

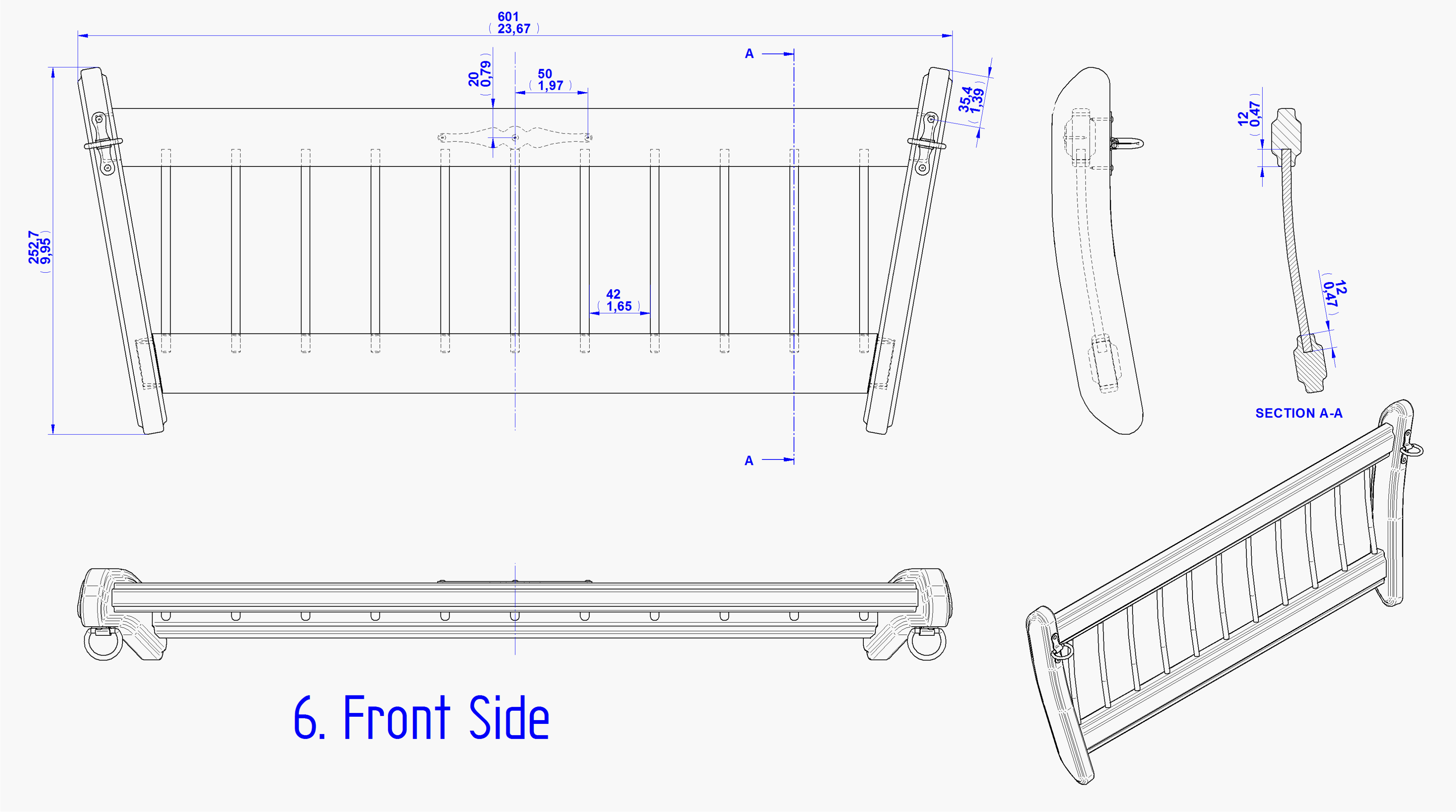

6,9
R 11,7
16,7
Φ 3,4
4.13 , 5.08 and 6.09 Front Ring
4.09 , 5.10 and 6.07 Tack D1,6 x 15mm
Standard Parts

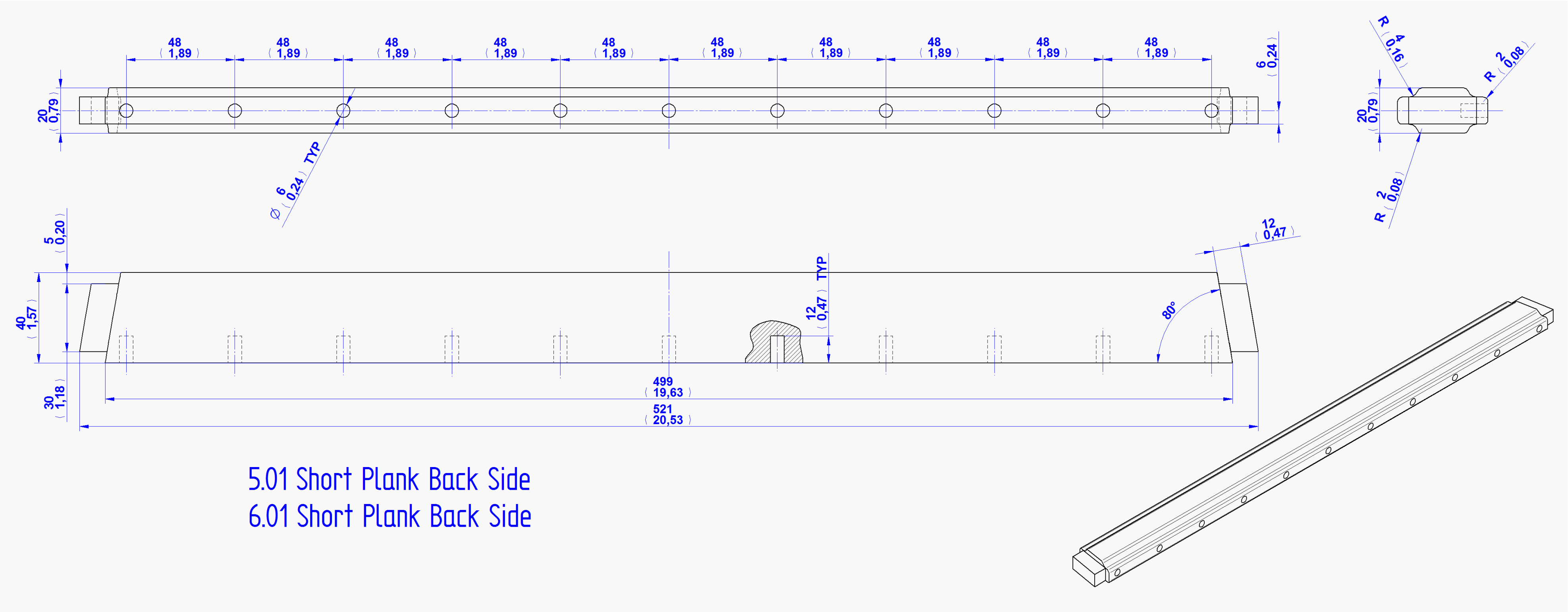
6. Front Side Subassembly
Parts List



Item Number	Title	Material	Quantity	Category
1	Short Plank Back Side	Wood	1	
2	Incline Plank Front	Wood	1	
3	Incline Plank Front Mirror	Wood	1	
4	Longer Plank Front Side	Wood	1	
5	Wire Front Side	Steel	11	
6	Decoration	Steel	1	
7	Tack D1,6 x 15mm	Steel	7	Standard Part
8	Joint Back Side	Steel	2	
9	Front Ring	Steel	2	Standard Part

Front Side Subassembly Drawing

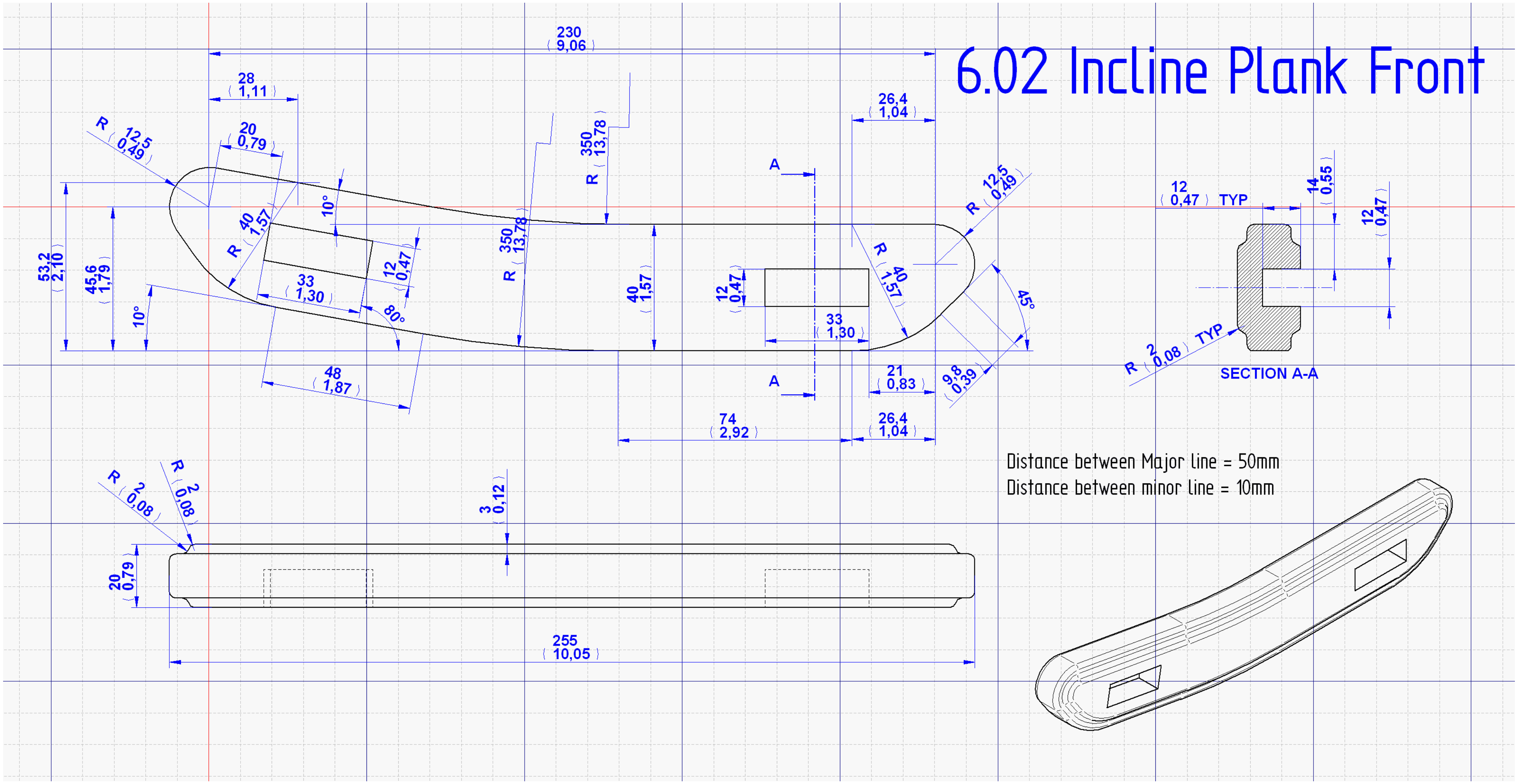

601
(23,67)
20
(0,79)
50
(1,97)
A
35,4
(1,39)
252,7
(9,95)
42
(1,65)
12
(0,47)
12
(0,47)
A
SECTION A-A
6. Front Side


48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
6 (0,24)
20 (0,79)
∅ 6 (0,24) TYP
R 4 (0,16)
R 2 (0,08)
20 (0,79)
R 2 (0,08)
5 (0,20)
40 (1,57)
30 (1,18)
12 (0,47) TYP
80°
12 (0,47)
499 (19,63)
521 (20,53)

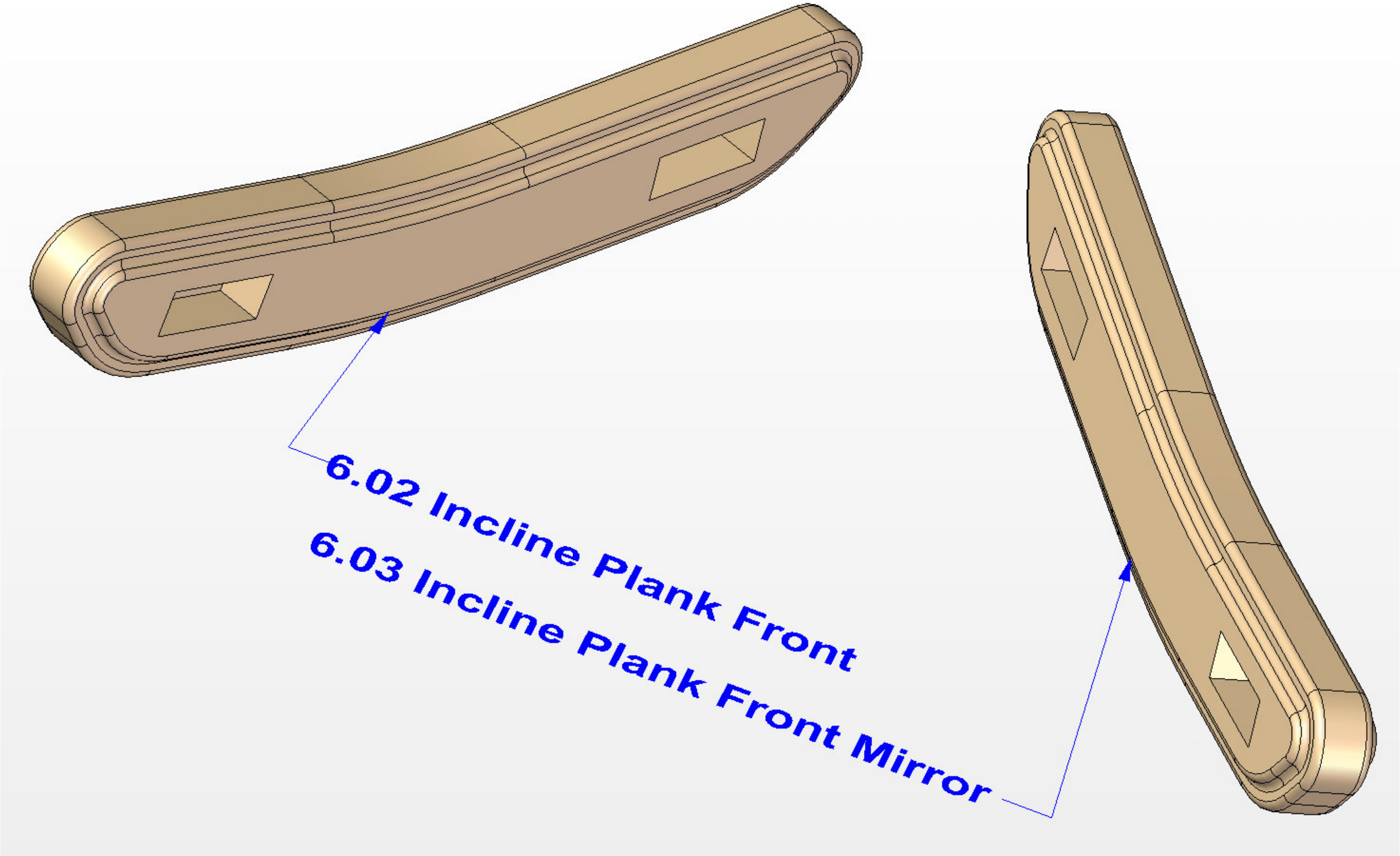
5.01 Short Plank Back Side

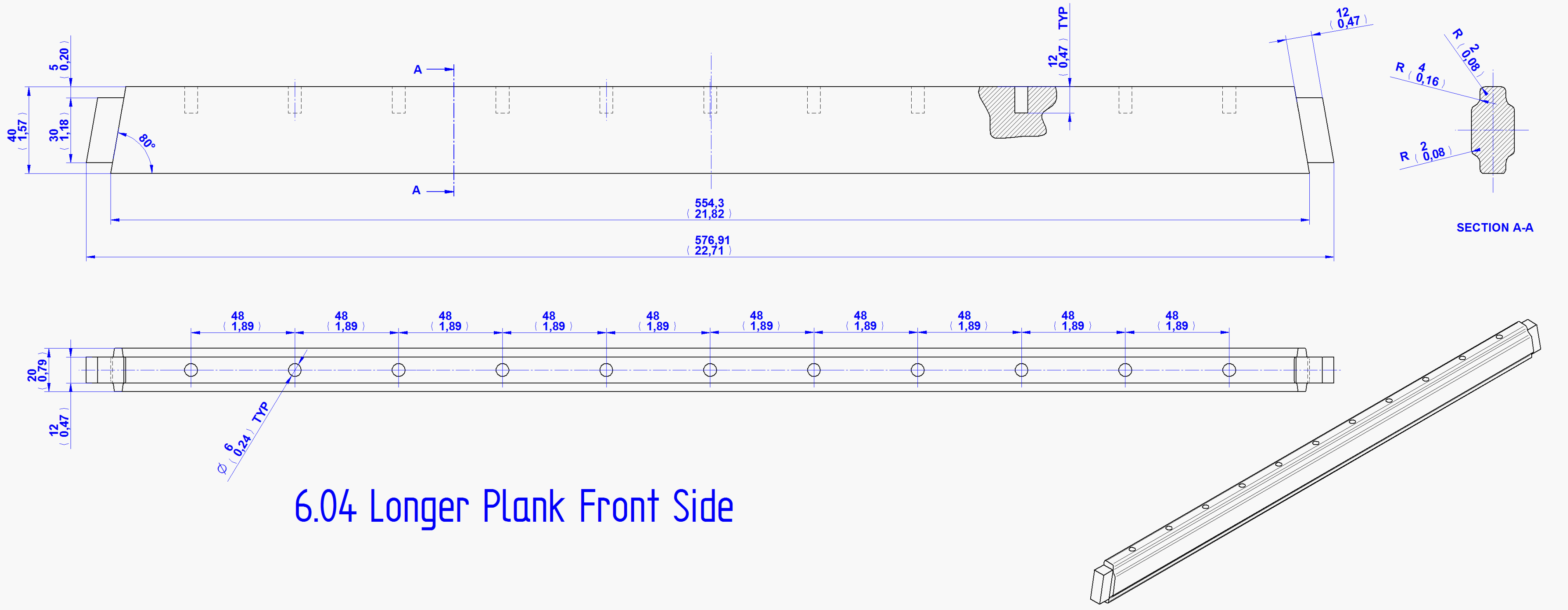
6.01 Short Plank Back Side

6.02 Incline Plank Front


230 (9,06)
28 (1,11)
20 (0,79)
R (12,5 0,49)
R (350 13,78)
26,4 (1,04)
A
R (12,5 0,49)
53,2 (2,10)
45,6 (1,79)
10°
10°
R (40 1,57)
33 (1,30)
12 (0,47)
80°
48 (1,87)
40 (1,57)
12 (0,47)
33 (1,30)
R (40 1,57)
45°
9,8 (0,39)
21 (0,83)
74 (2,92)
26,4 (1,04)
12 (0,47) TYP
14 (0,55)
12 (0,47)
R (2 0,08) TYP
SECTION A-A
R (2 0,08)
R (2 0,08)
3 (0,12)
20 (0,79)
255 (10,05)

Distance between Major line = 50mm
Distance between minor line = 10mm

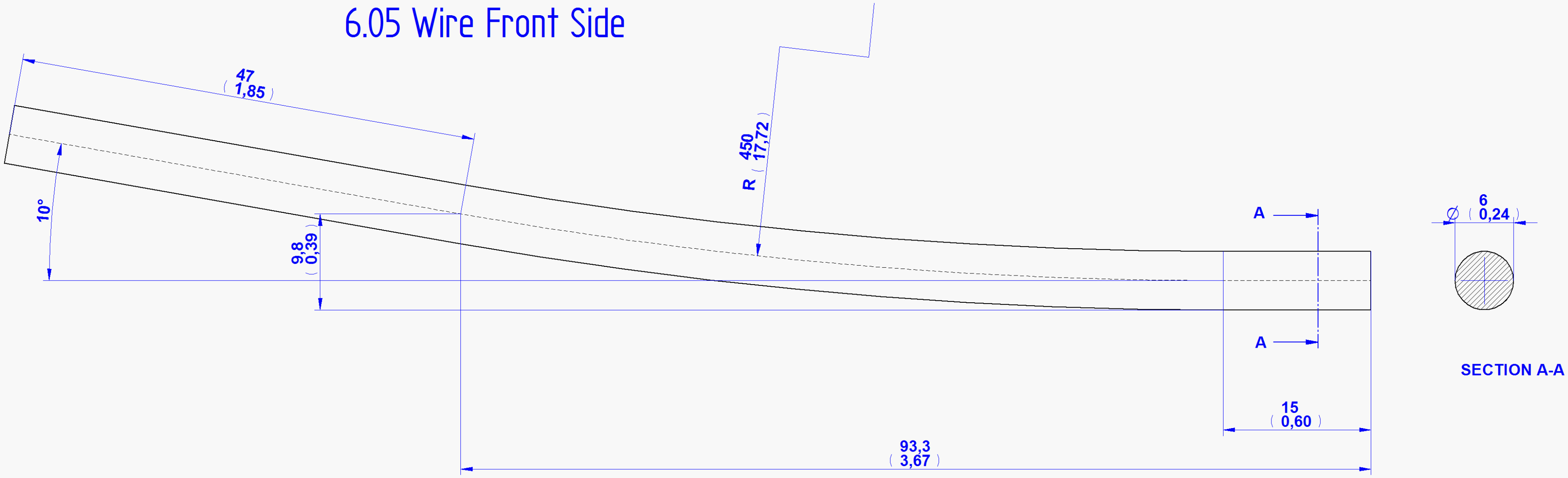

6.02 Incline Plank Front
6.03 Incline Plank Front Mirror

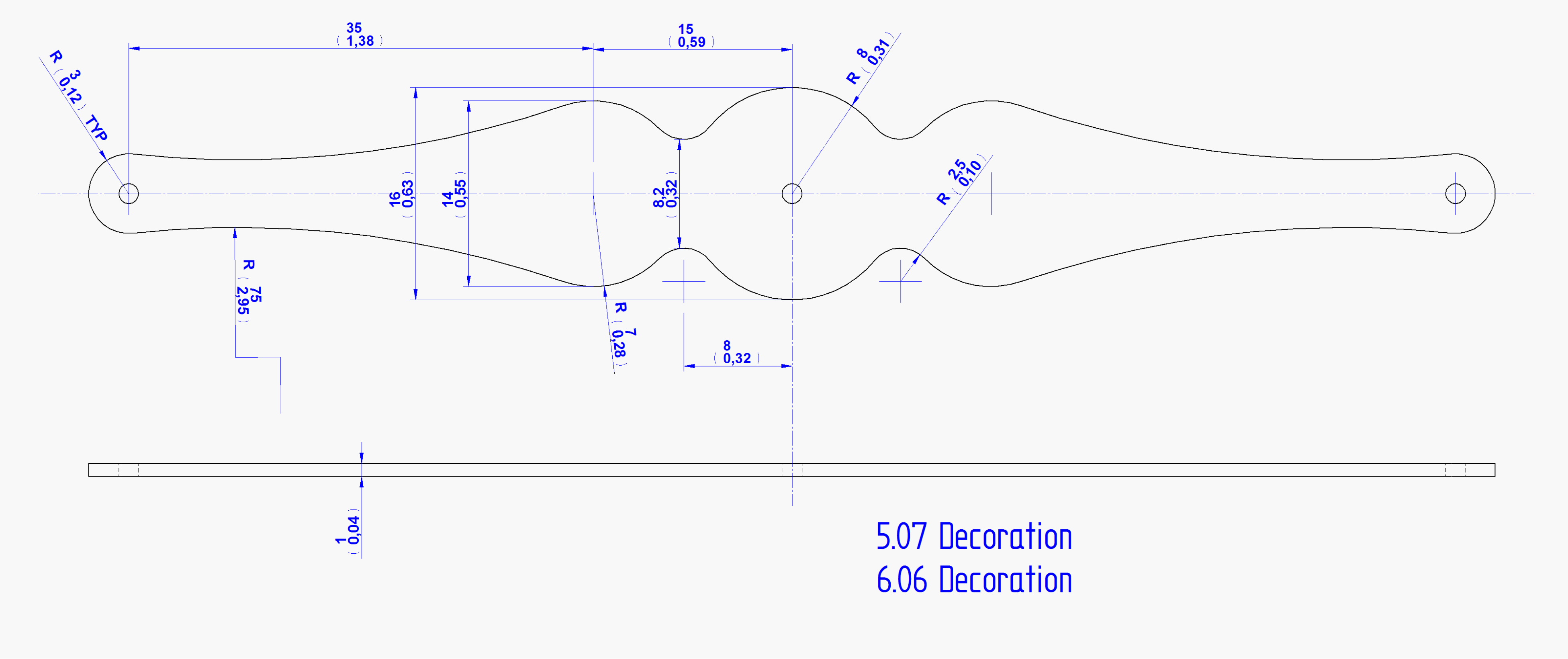


5 (0,20)
40 (1,57)
30 (1,18)
80°
A
A
12 (0,47) TYP
12 (0,47)
554,3 (21,82)
576,91 (22,71)
R 2 (0,08)
R 4 (0,16)
R 2 (0,08)
SECTION A-A
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
48 (1,89)
20 (0,79)
12 (0,47)
⌀ 6 (0,24) TYP

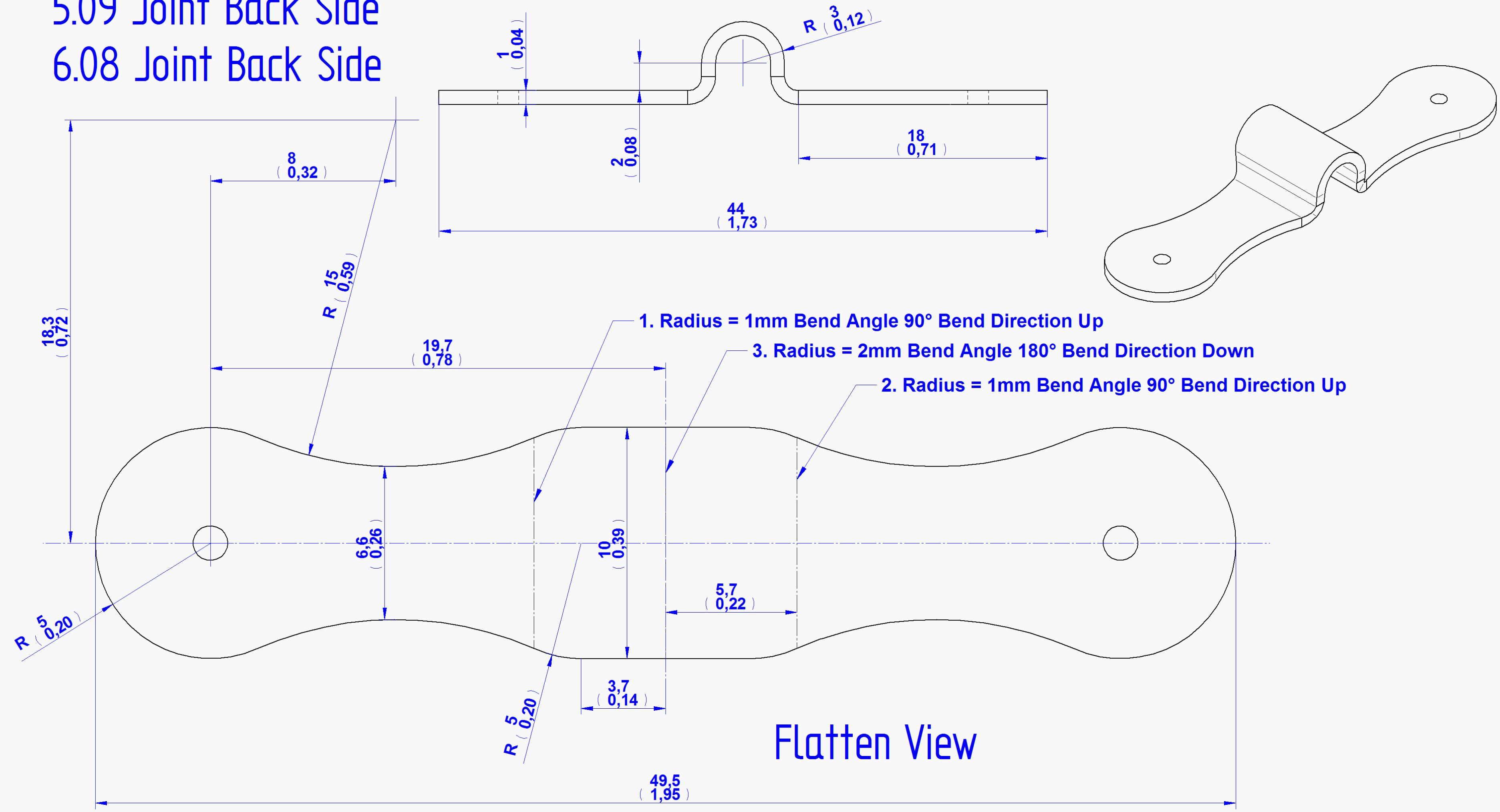
6.04 Longer Plank Front Side

6.05 Wire Front Side


47
(1,85)
R 450
(17,72)
10°
9,8
(0,39)
A
A
6
∅ (0,24)
SECTION A-A
15
(0,60)
93,3
(3,67)


R 3 (0,12) TYP
35 (1,38)
15 (0,59)
R 8 (0,31)
16 (0,63)
14 (0,55)
8,2 (0,32)
R 2,5 (0,10)
R 75 (2,95)
R 7 (0,28)
8 (0,32)
1 (0,04)
5.07 Decoration
6.06 Decoration

5.09 Joint Back Side
6.08 Joint Back Side

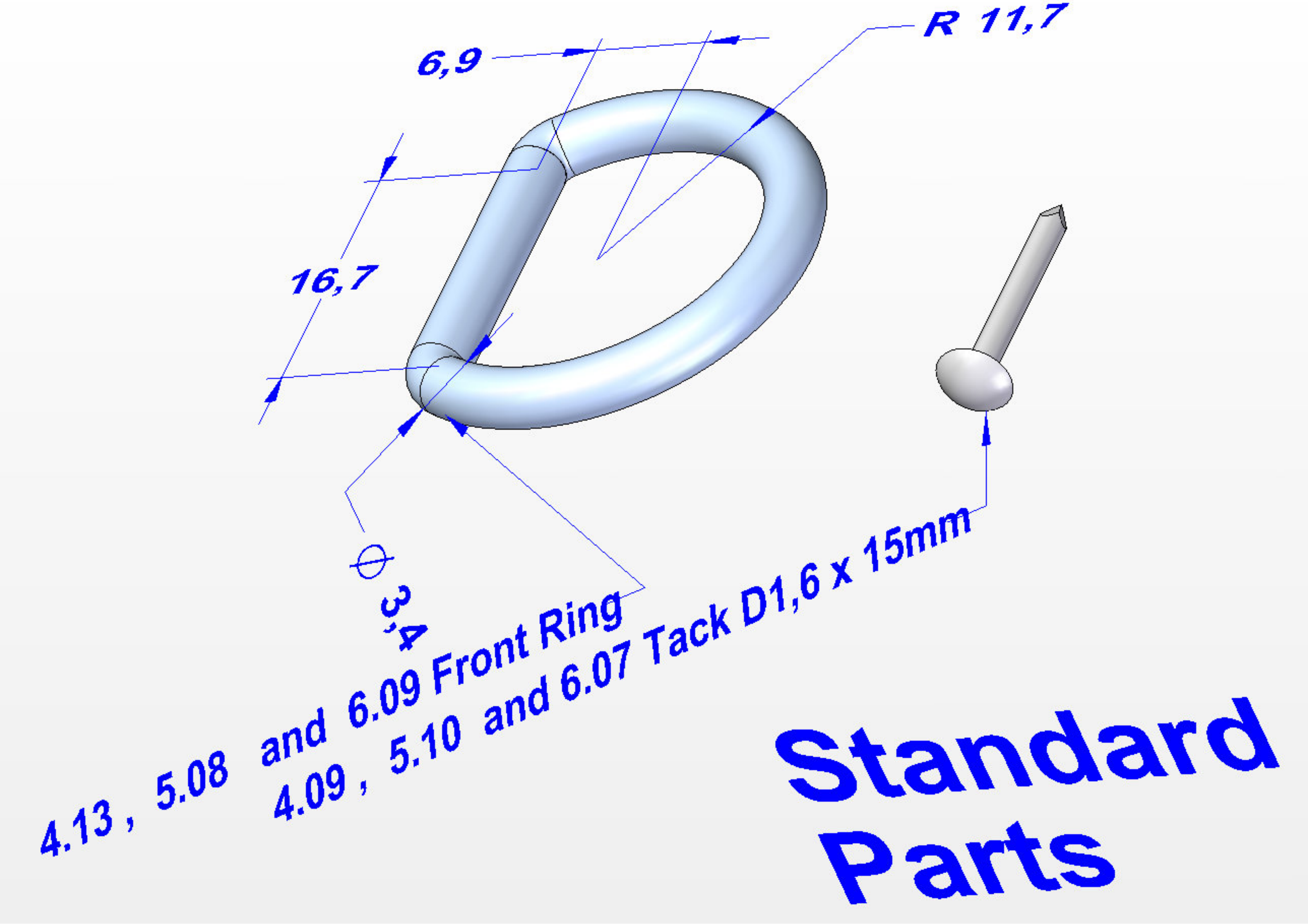

R 3 (0,12)
1 (0,04)
2 (0,08)
18 (0,71)
44 (1,73)
8 (0,32)
R 15 (0,59)
18,3 (0,72)
19,7 (0,78)
6,6 (0,26)
10 (0,39)
5,7 (0,22)
R 5 (0,20)
3,7 (0,14)
R 5 (0,20)
49,5 (1,95)

1. Radius = 1mm Bend Angle 90° Bend Direction Up

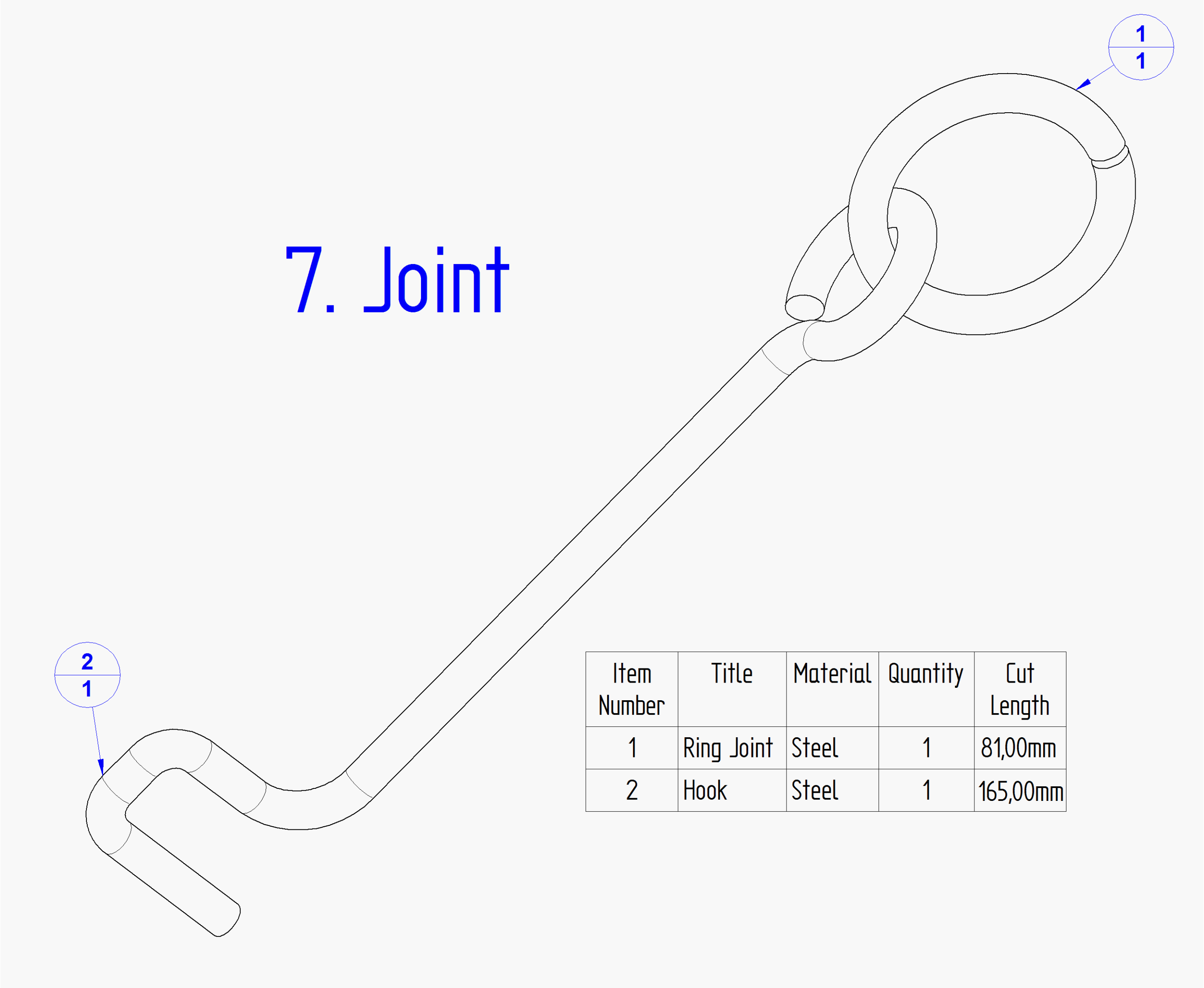
3. Radius = 2mm Bend Angle 180° Bend Direction Down

2. Radius = 1mm Bend Angle 90° Bend Direction Up

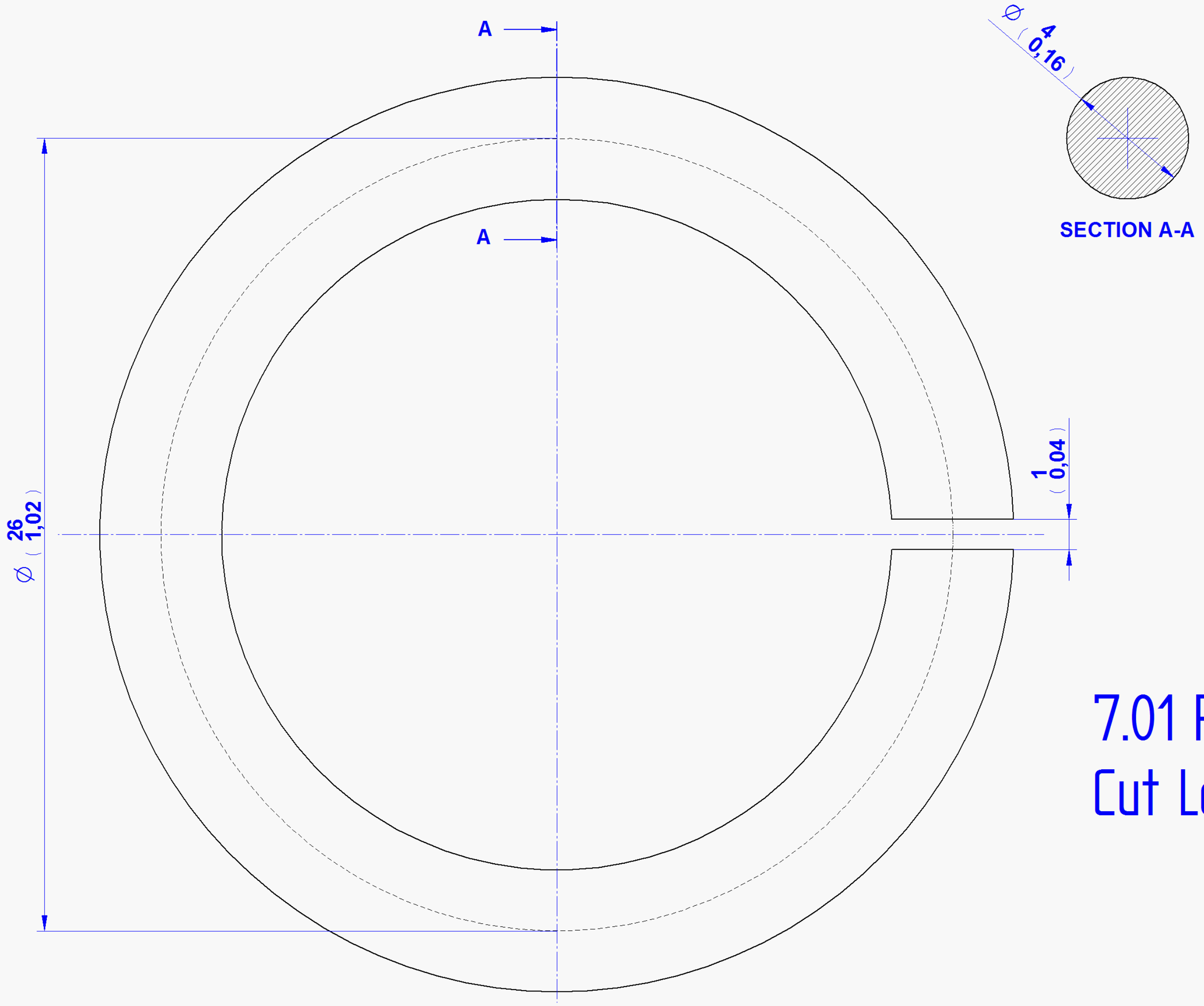
Flatten View


6,9
R 11,7
16,7
Φ 3,4
4.13 , 5.08 and 6.09 Front Ring
4.09 , 5.10 and 6.07 Tack D1,6 x 15mm
Standard
Parts

7. Joint Subassembly
Parts List

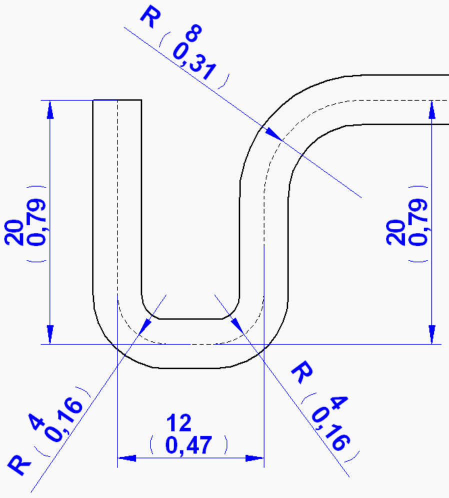


Item Number	Title	Material	Quantity	Cut Length
1	Ring Joint	Steel	1	81,00mm
2	Hook	Steel	1	165,00mm


A
A
Ø 4 (0,16)
SECTION A-A
Ø 26 (1,02)
1 (0,04)

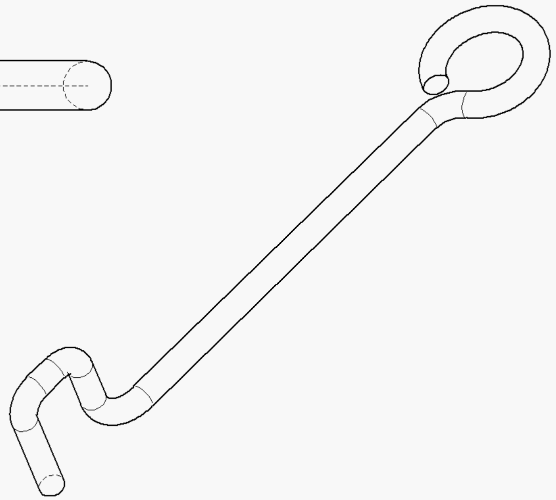
7.01 Ring Joint

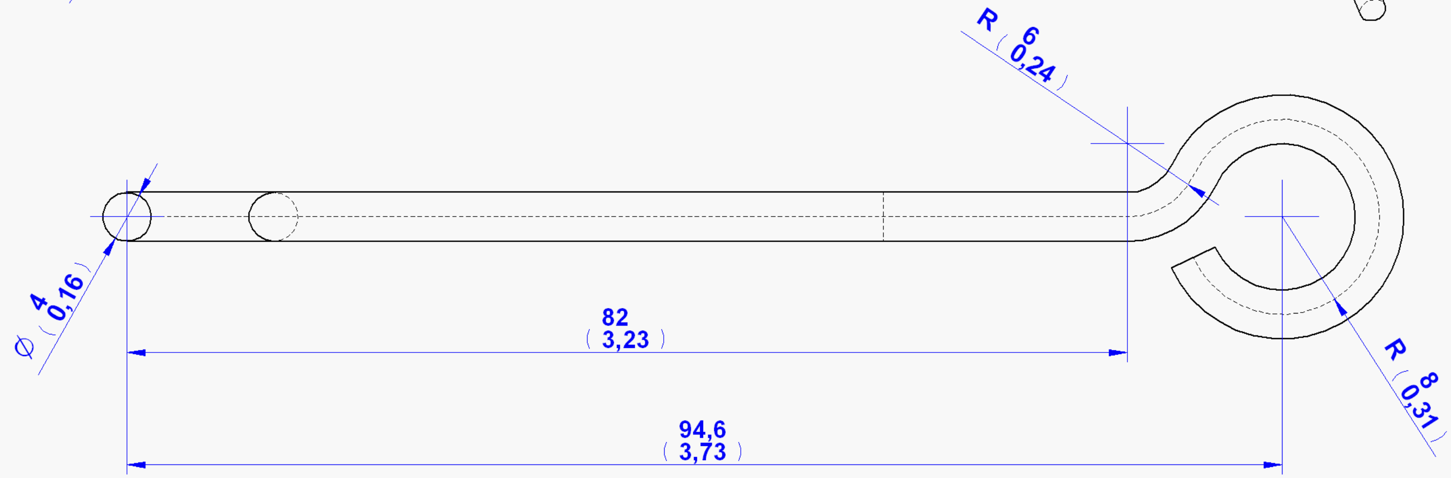
Cut Lenght = 81mm


R 8 (0,31)
20 (0,79)
20 (0,79)
R 4 (0,16)
R 4 (0,16)
12 (0,47)

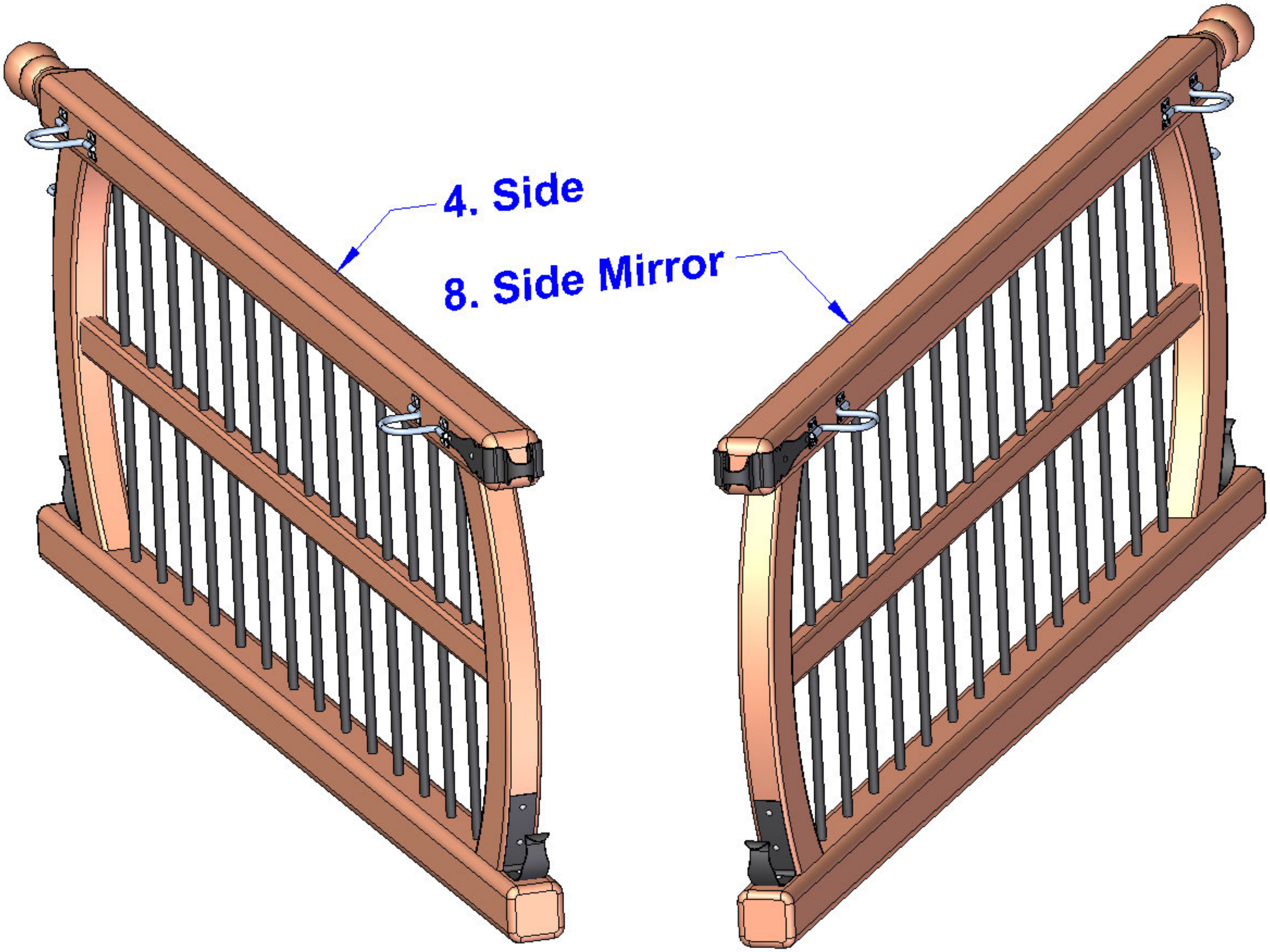
7.02 Hook

Cut Lenght = 165,00mm




R 6 (0,24)
∅ 4 (0,16)
82 (3,23)
94,6 (3,73)
R 8 (0,31)

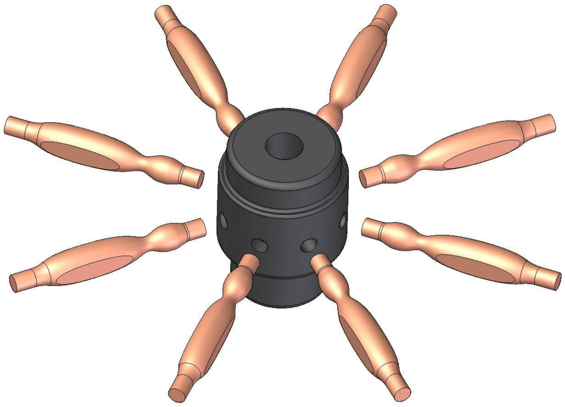
8. Side Mirror Subassembly

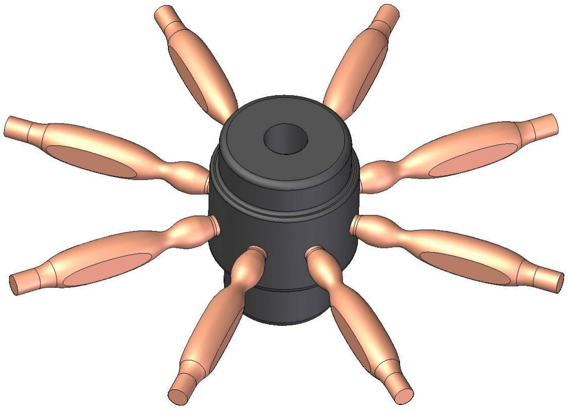

4. Side
8. Side Mirror

Assemblage Instructions

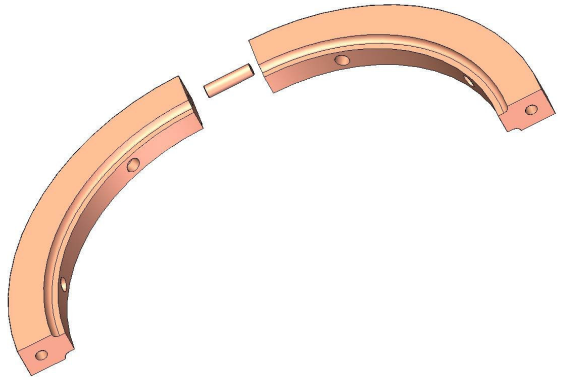
1. WHEEL

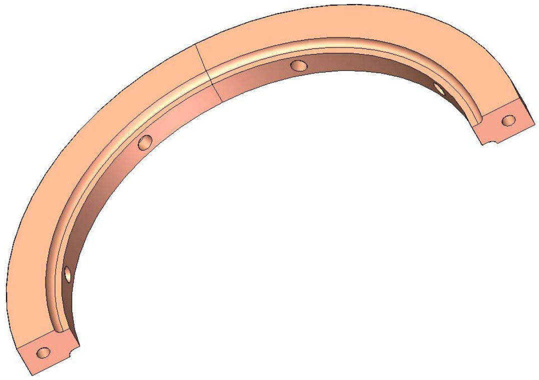
1. Attach the Toggle (items 1.05) to the Hub (item 1.04) with glue.

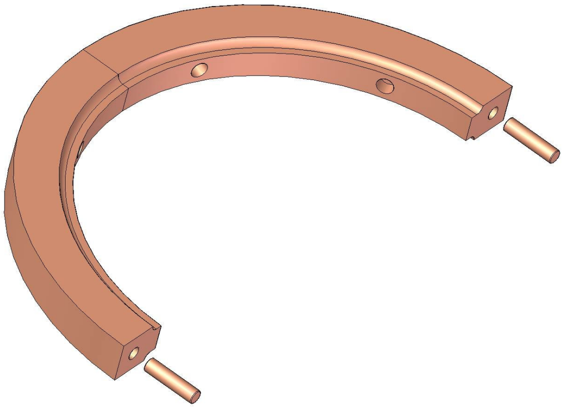


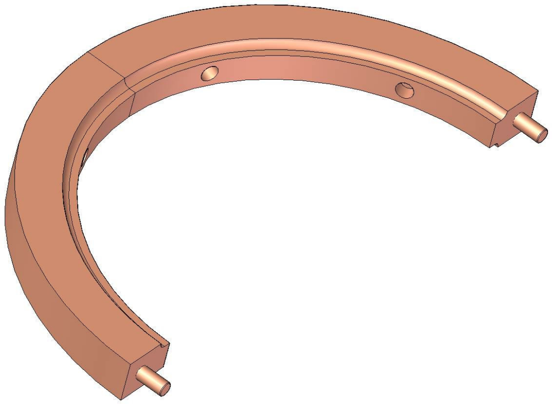


2. Form one half of the wheel by joining the two Quarters (item 1.01) with glue by using Pin D10x40mm (Item 1.02). Put some glue in the two remaining holes and attach the Pins D10x40mm (Item 1.02) in it.

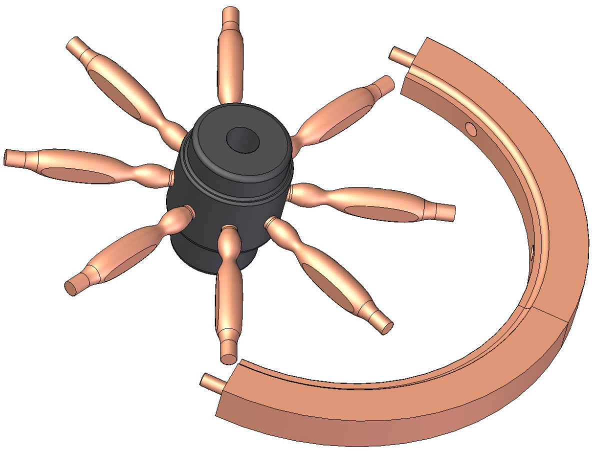


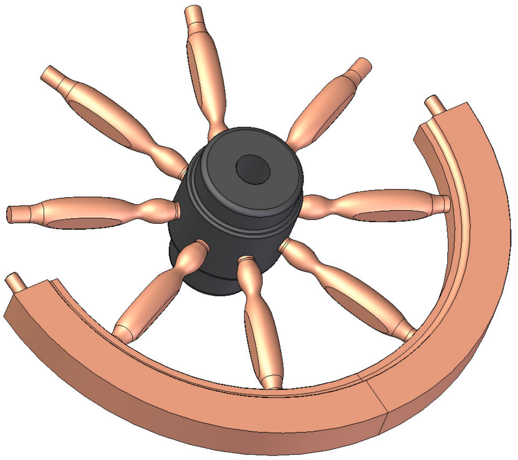




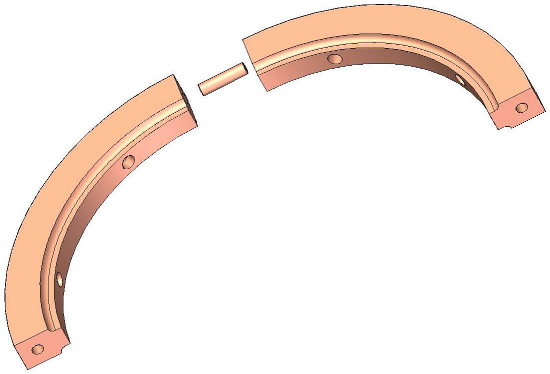


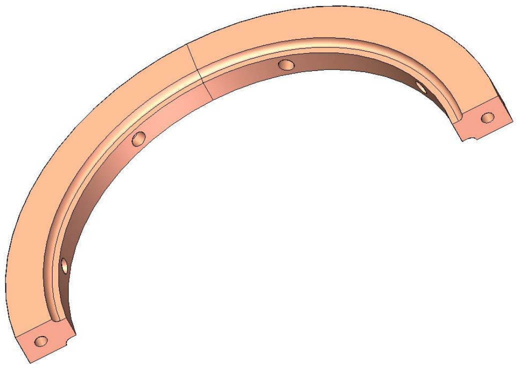
3. Join the two subassemblies made in step 1 and step 2 with glue.

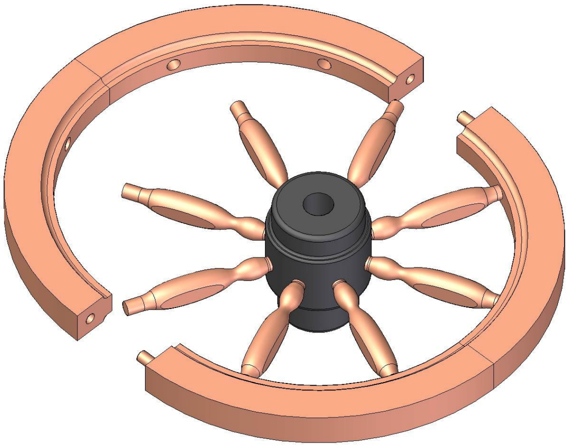


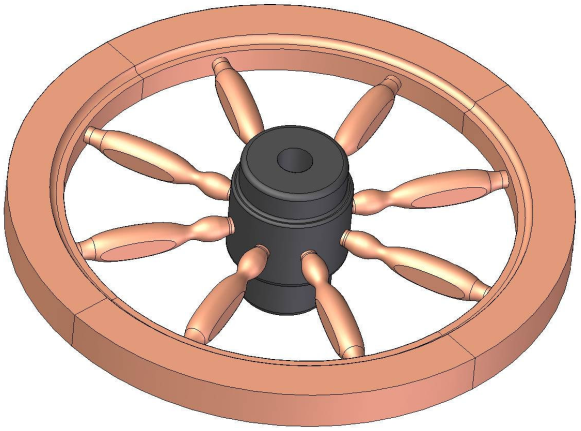


4. Join the two remaining Quarters (item 1.01) with glue by using Pins D10x40mm (Item 1.02); then attach this subassembly with glue to the subassembly made in step 3.

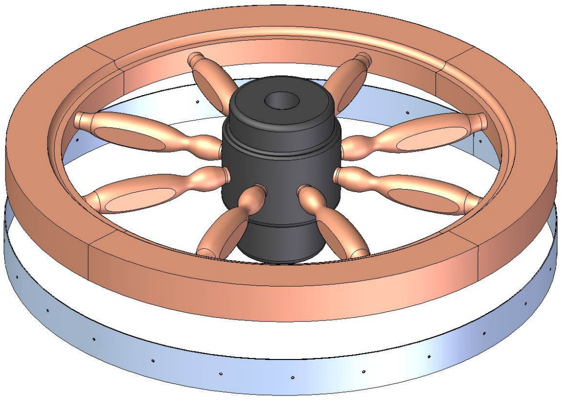


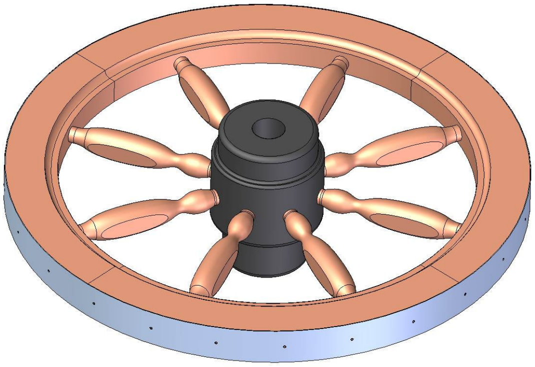




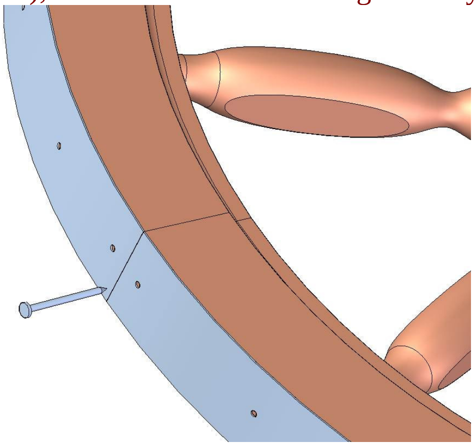


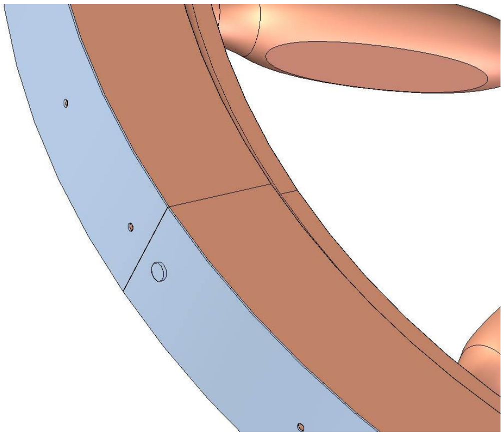
5. Now you need to make the Periphery Plate (item 1.03). On 2D drawing is marked approximately length of this item (1258,6 mm (or 49,55 inches)), but we recommend to measure circumference of the wheel you just made, and then to cut out the plate with exact length that you have measured. Drill the holes on the plate as it is shown on 2D drawing, and then encircle it around the Wheel Subassembly.

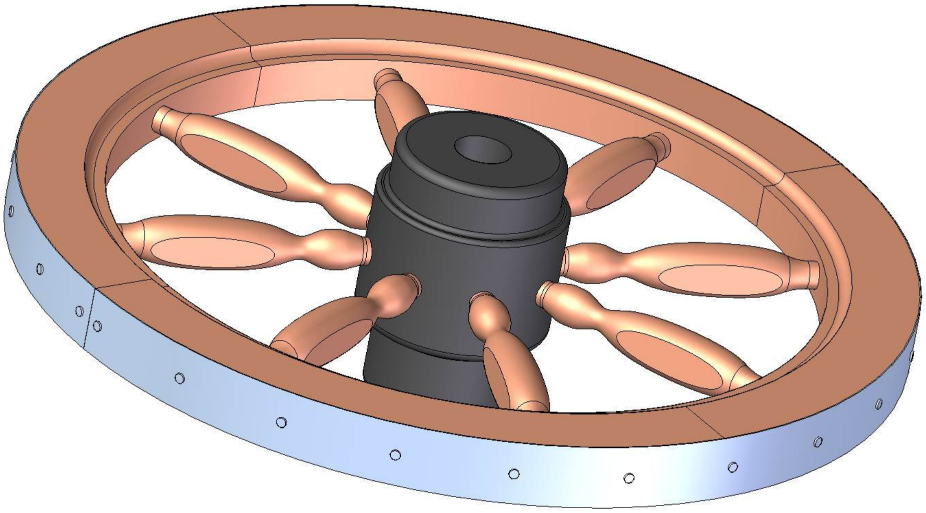




6. Hammer the Nails D1,8x30mm (item 1.06) first into the holes on the two ends of Periphery Plate (item 1.03), then into all the remaining holes by order.



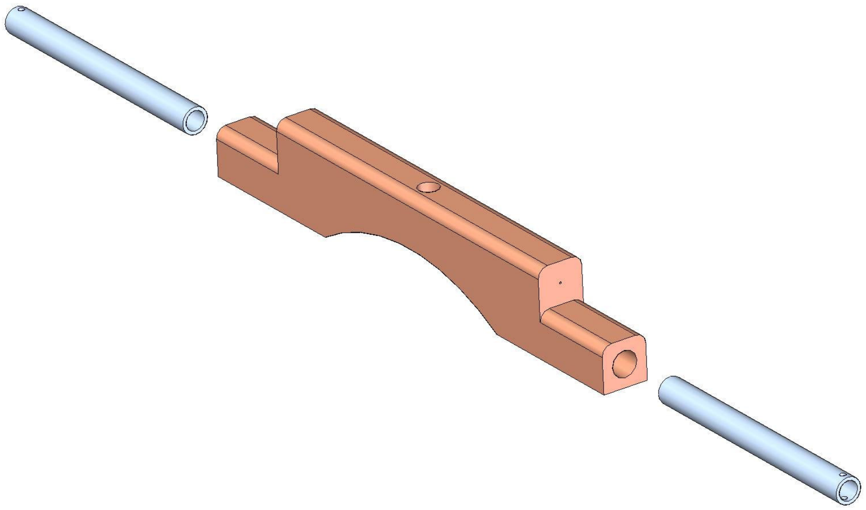


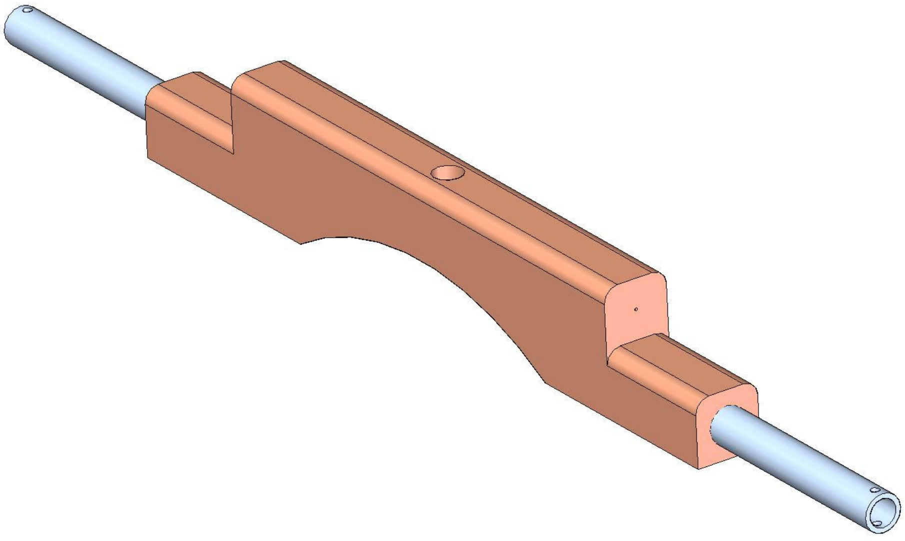


When you finish the 6th step, you have formed the Wheel subassembly. Of course, you need to build another three wheels for your carriage...

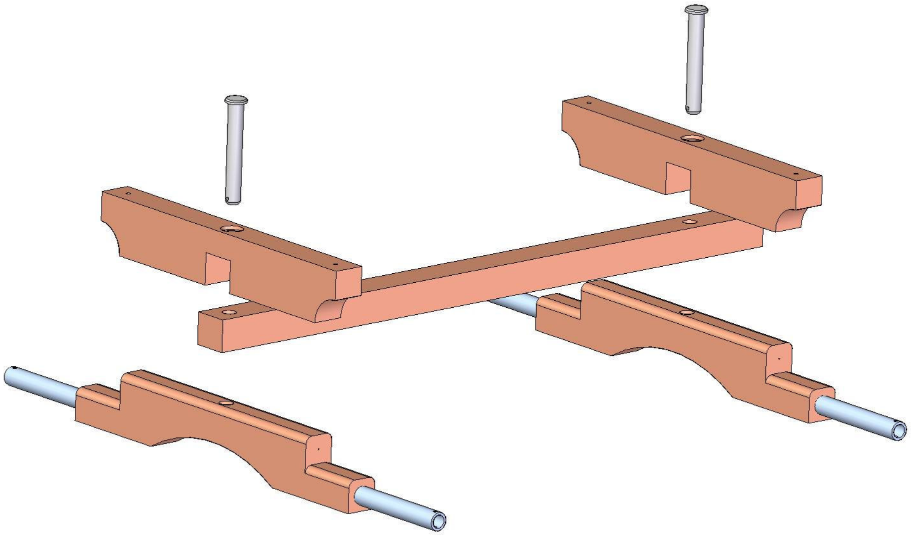
2. BASE

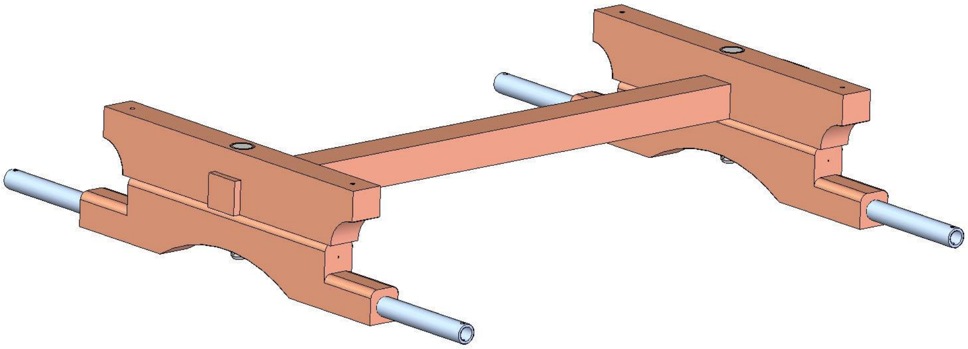
1. Push the Tubular Axle(item 2.04) into the Axle (item 2.03) by using hammer. You need to make the two pieces of this subassembly.



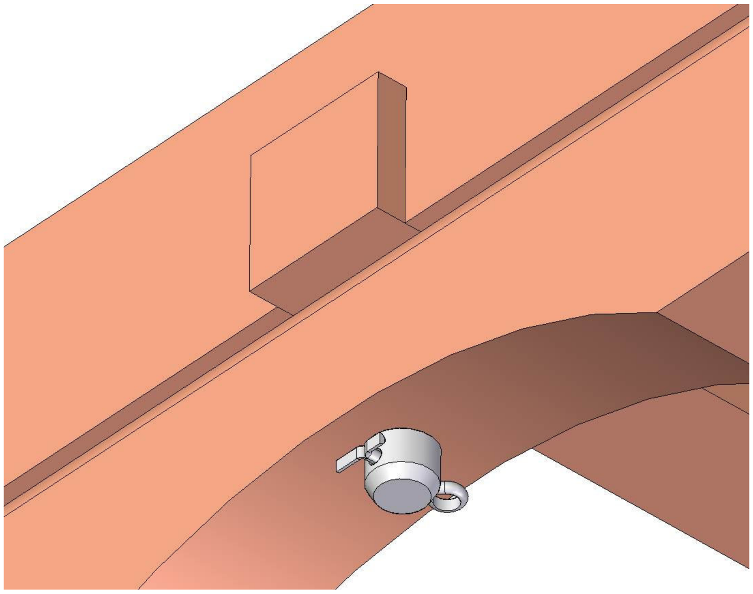


2. Form the subassembly as given on the picture by using the Carrier (item 2.01), Carrier Axle (item 2.02), Pin D20x140 mm (items 2.11) and the two subassemblies made in the previous step.

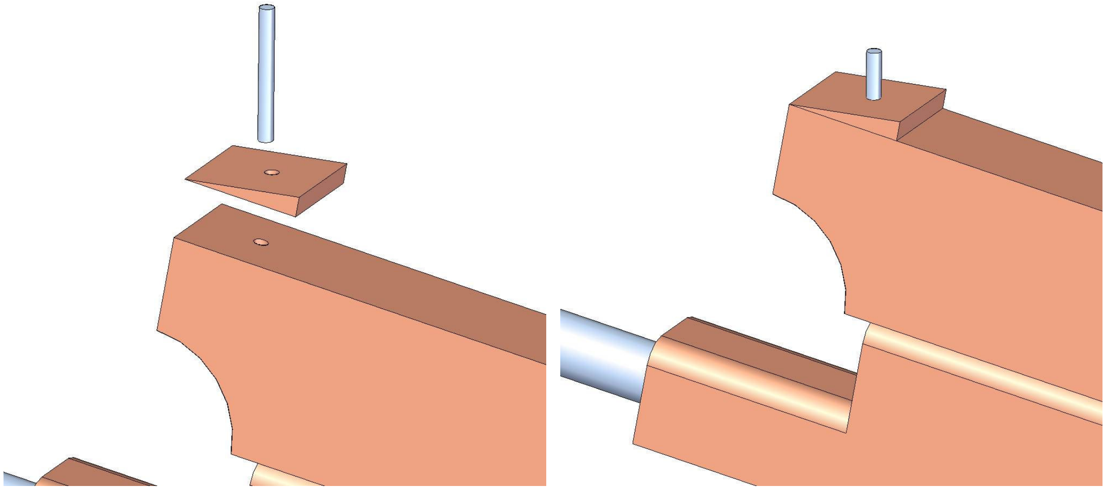


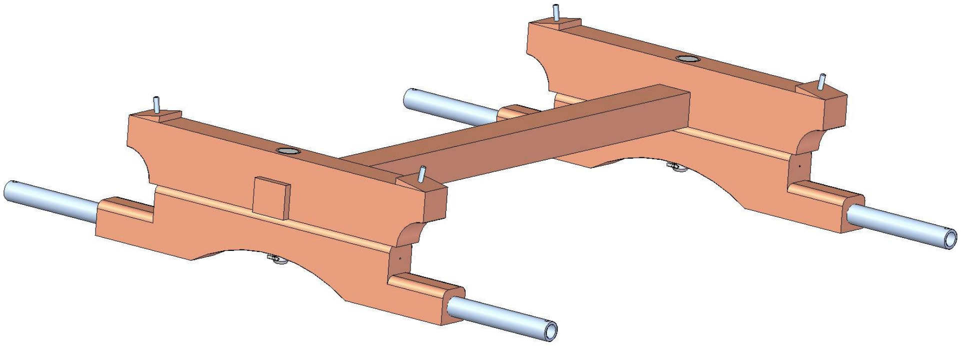


3. Push the Split Pin (item 2.13) in the hole of the Pin D20x140 mm (item 2.11). By this way, you will prevent the Pin D20x140 mm (item 2.11) to pull out of the assembly.

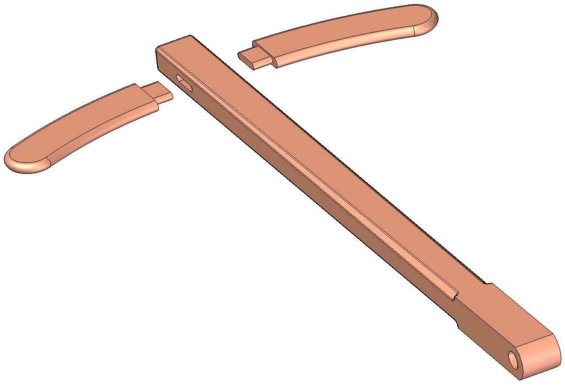


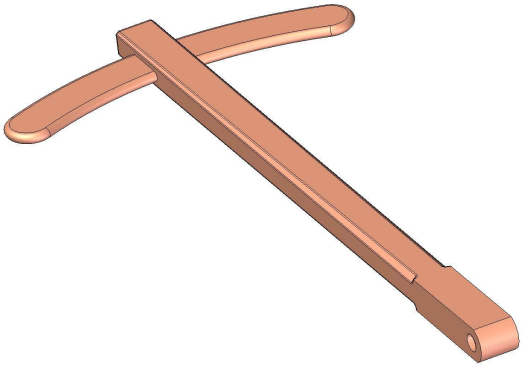
4. Lean the Limiter (item 2.10) against the Carrier (item 2.01) and mark the position of the hole on the Carrier (item 2.01) with some sharp object. Then drill the hole with angle 80 degrees, as it is shown on 2D drawing of this item (Carrier (2.01). Attach the Limiter (item 2.10) to the Carrier (item 2.01) with glue, and immediately push the Side Support (item 2.12) into the hole. Do this operation on all the four places.



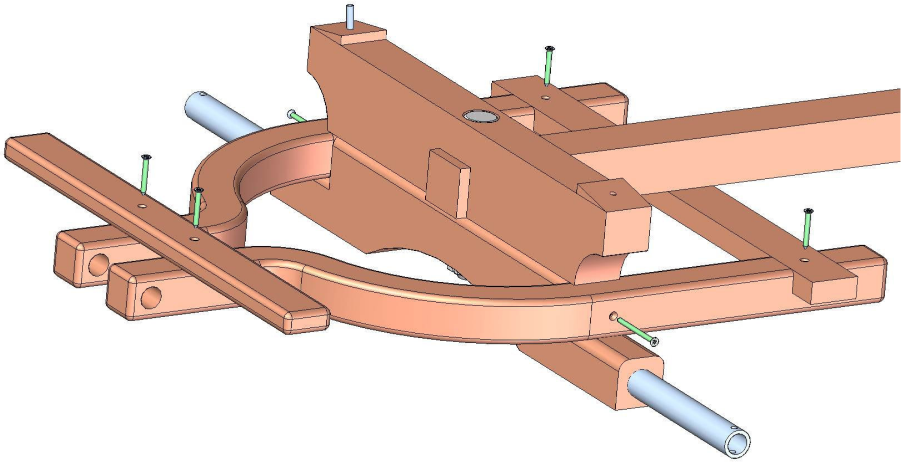


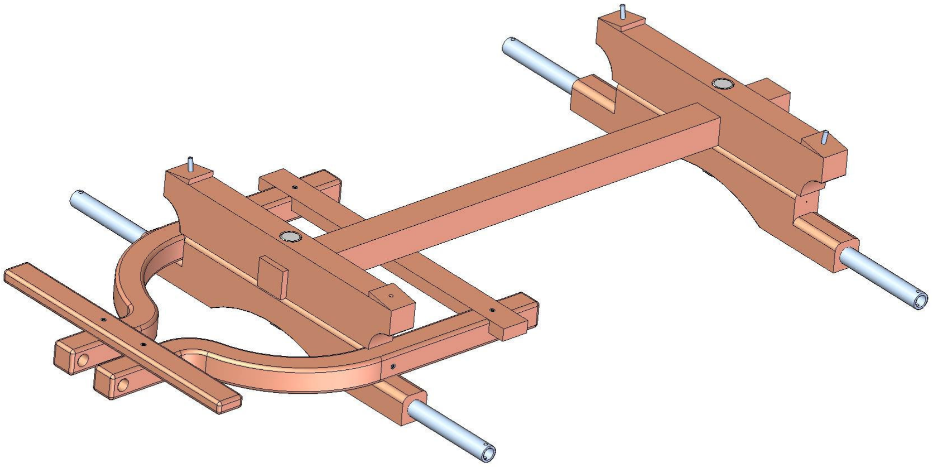
5. Attach the Handle (items 2.19) to the Pull Plank (item 2.18) with glue.



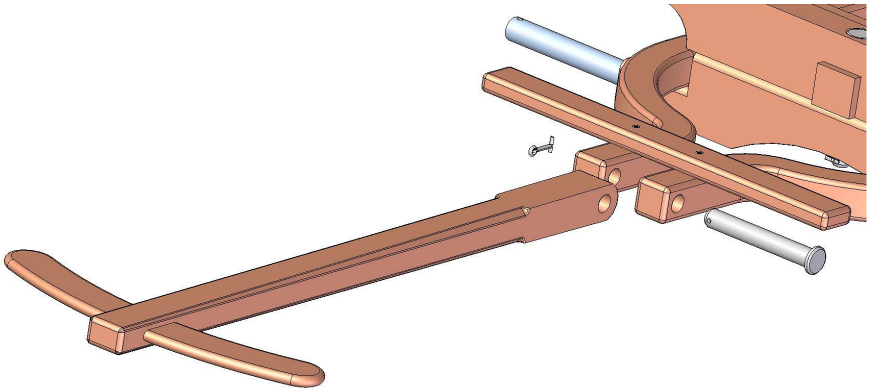


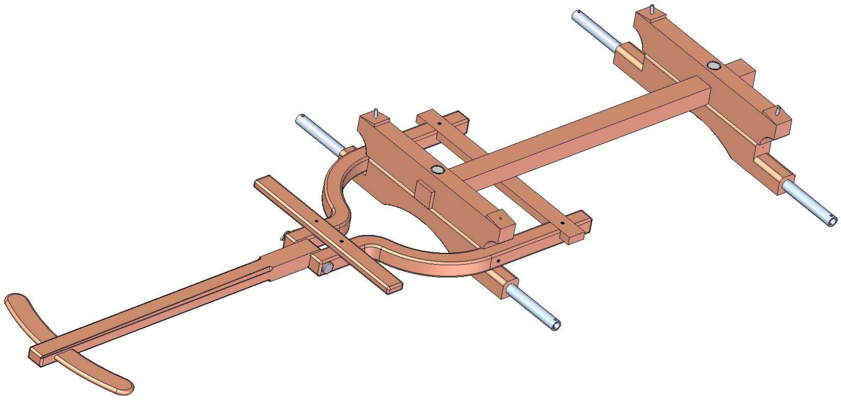
6. Form the subassembly by using the Curved Base Plank (item 2.15), Curved Base Plank Mirror (item 2.20), Back Base Plank (item 2.16), Front Base Plank (item 2.17) and front subassembly made in the step 1 as it is shown on picture by drilling the Pilot holes and then using the Wood Screws (item 2.21 and 2.22). See the measurements of this subassembly on the 2D drawing of the subassembly 2. Base.



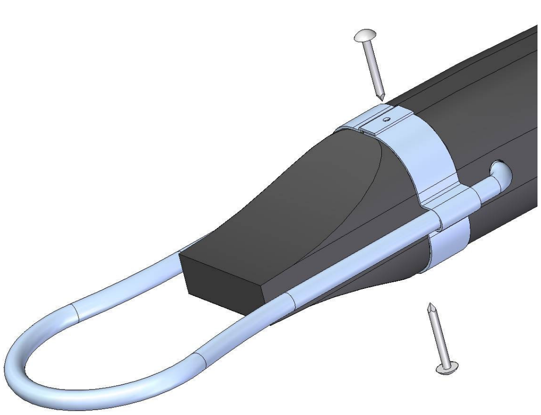


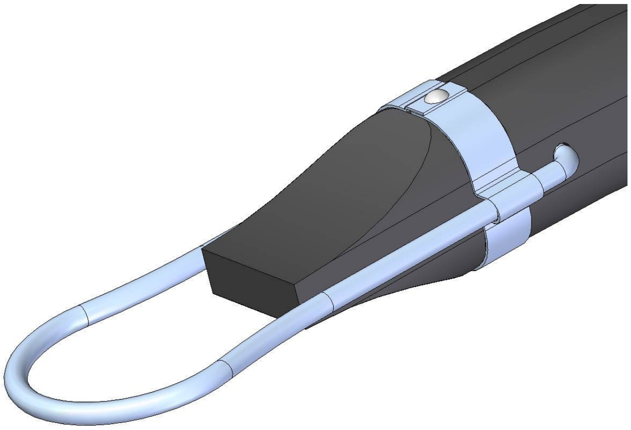
7. Fasten the subassembly made in the step 5 to the subassembly made in the previous step by using Pin D20 x 140mm (item 2.11). Ensure the Pin D20 x 140mm (item 2.11) with the Split Pin (item 2.13).





8. Push the Leg Holder Wire (item 2.07) into the holes on the Leg (item 2.06). Bend the Leg Holder Sheet metal (item 2.09) around it and hammer the Nails (Tack D1,6x15mm – Item 2.14). You need to make four pieces of this subassembly.

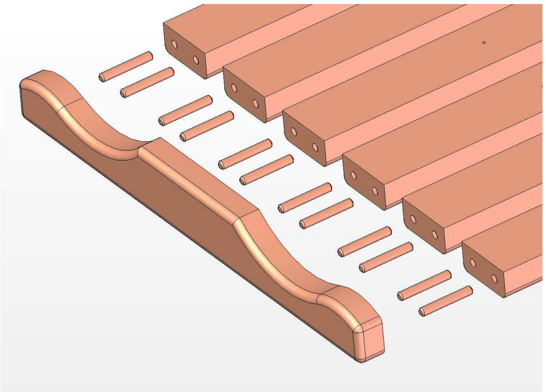


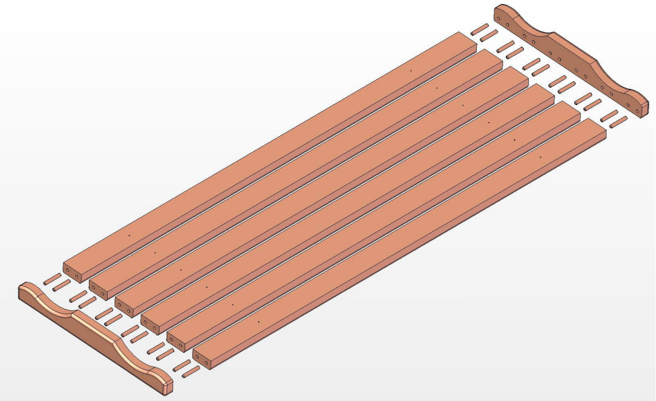


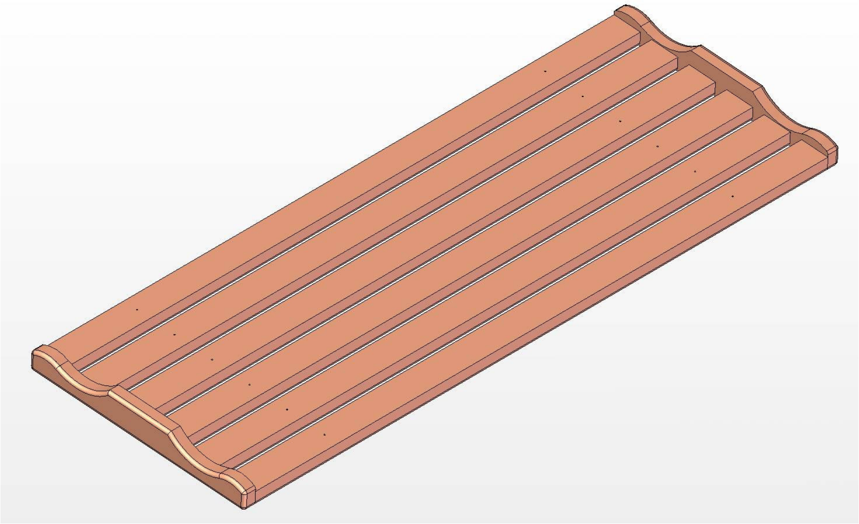
With this operation, we have finished forming the subassembly 2. Base. We will use the remaining items of this subassembly in the final phase of mounting.

3. BOTTOM

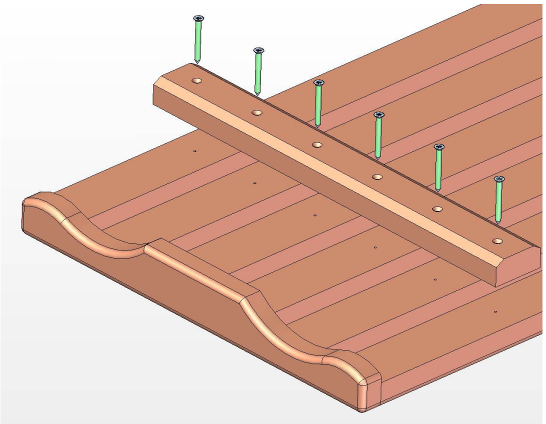
1. Join the Front and Back Plank (item 3.01) with Longitudal Plank (items 3.02) with Pin D6 x 40mm (items 3.04). You should drill the holes (mark them with Centers) for the Pins and put some glue in it first.

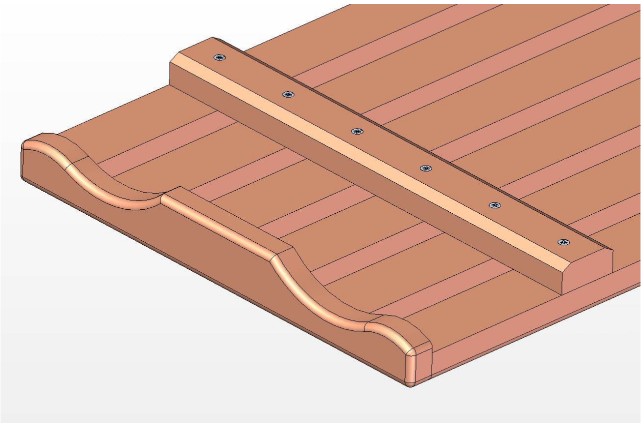


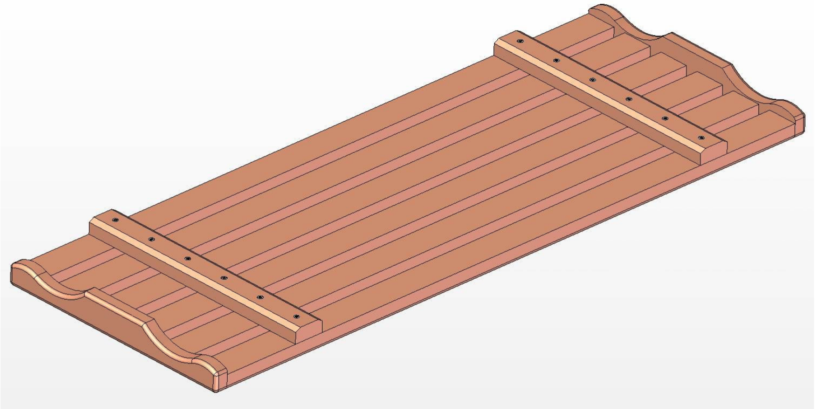




2. Join the Transverse Plank (items 3.03) with the assembly made in the previous step with Wood Screw D4 x 40 mm (item 3.05). You should drill the Pilot holes for the Wood Screws first.

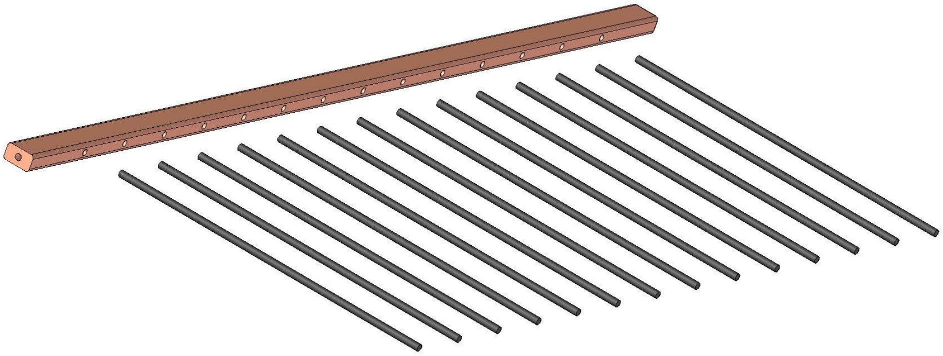


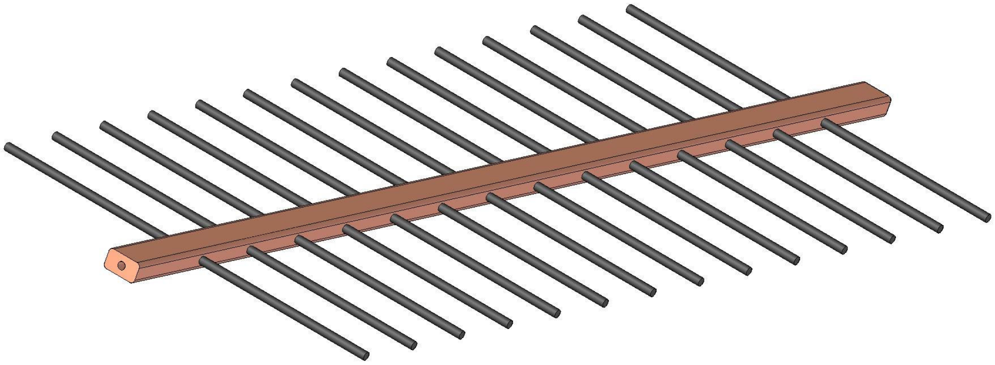




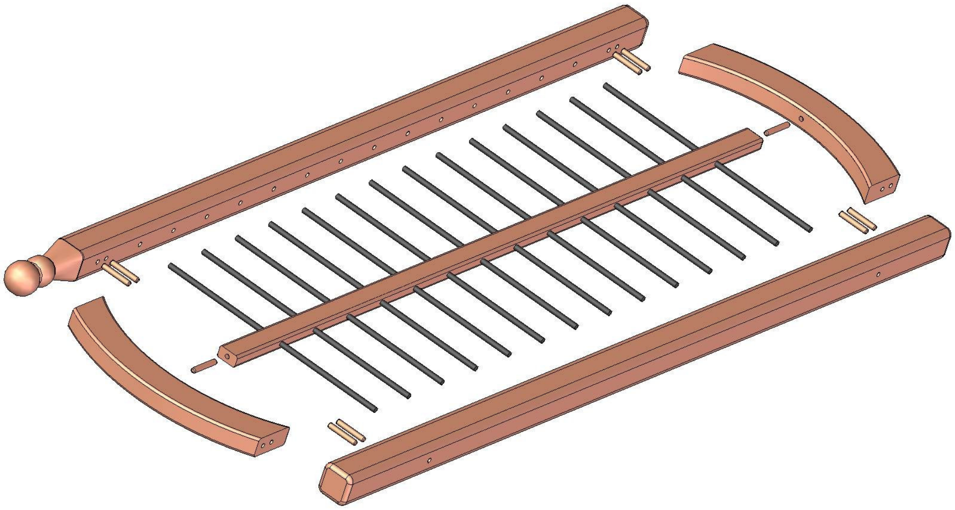
4. SIDE

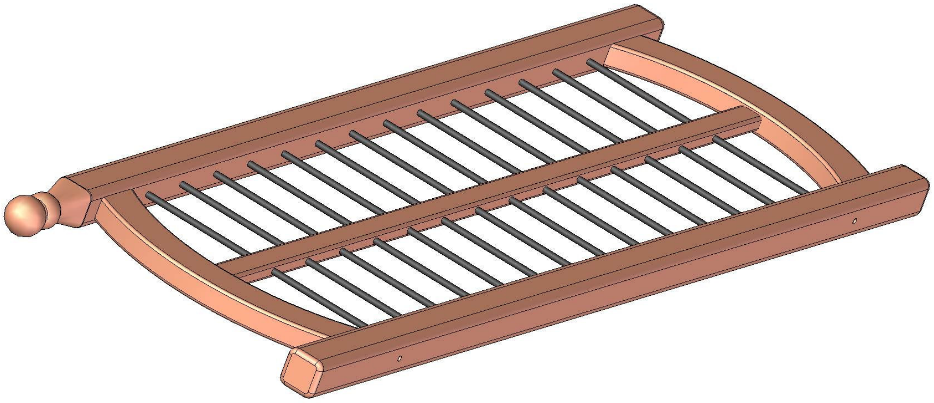
1. Pull the Wire D6mm Side (item 4.06) through the Middle Plank Side (item 4.04).



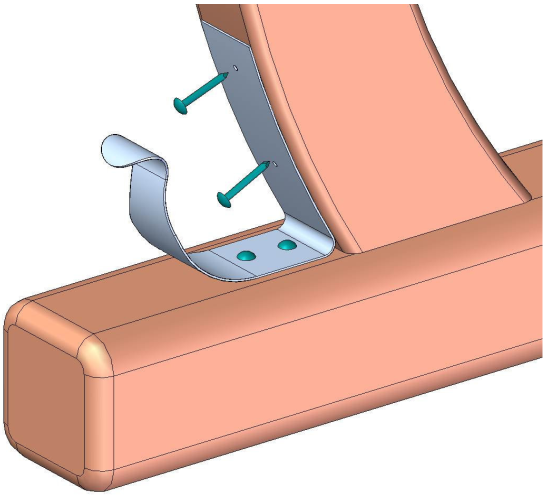


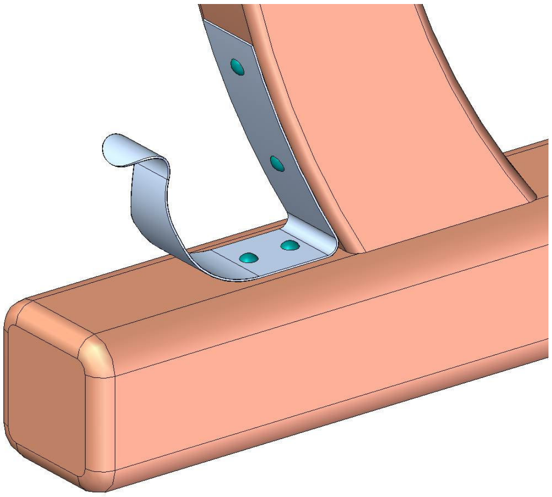
2. Form the assembly as it is shown on picture with the Upper Plank Side (item 4.01), Lower Plank Side (item 4.02), Pin D6 x 40mm (items 4.05), Circular Plank Side (item 4.03) and the subassembly made in the previous step. Before you join the two items with Pins, you should put some glue on it.

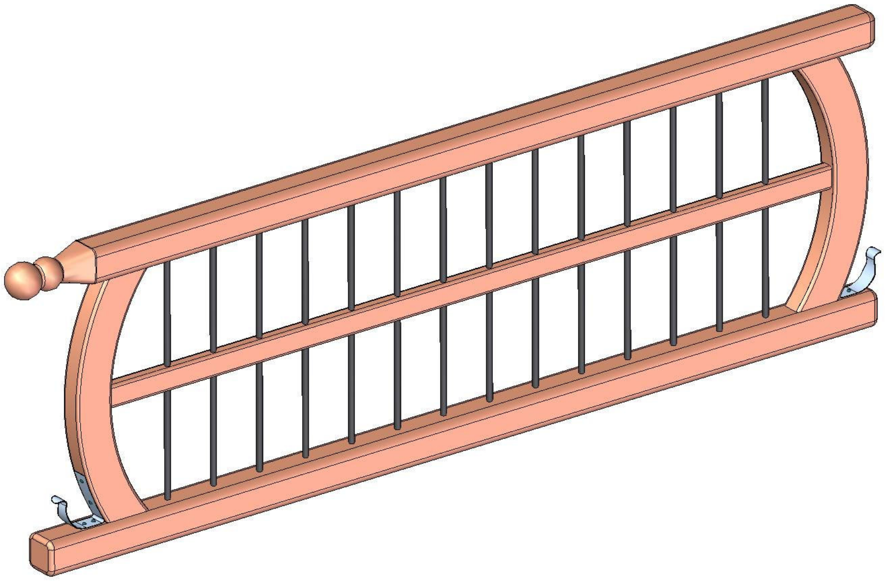




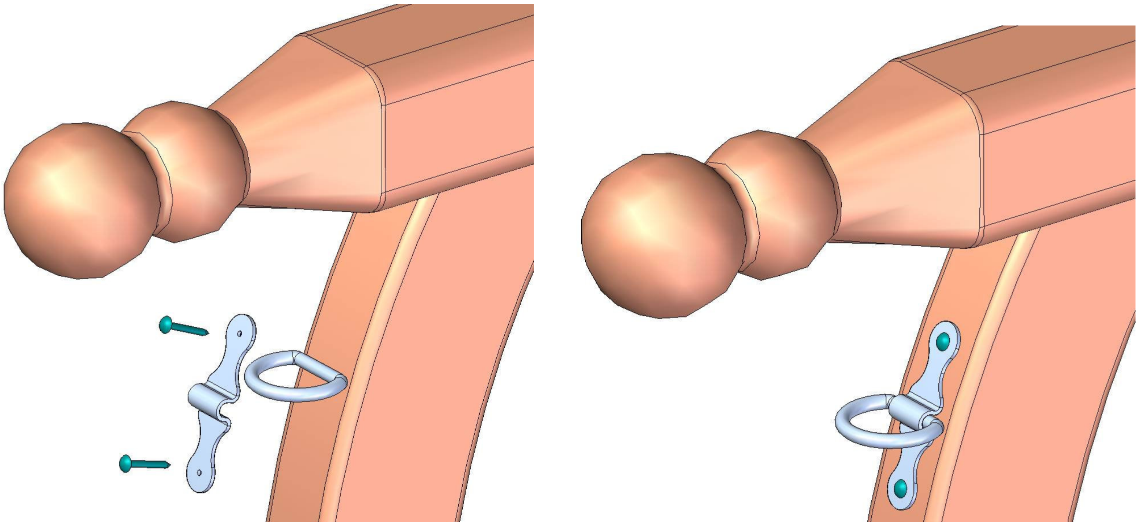
3. Fasten the Lower Plate (item 4.08) to the subassembly made in the previous step by using nails (Tack D1,6x15mm – Item 4.09). Repeat the same procedure on the other end.



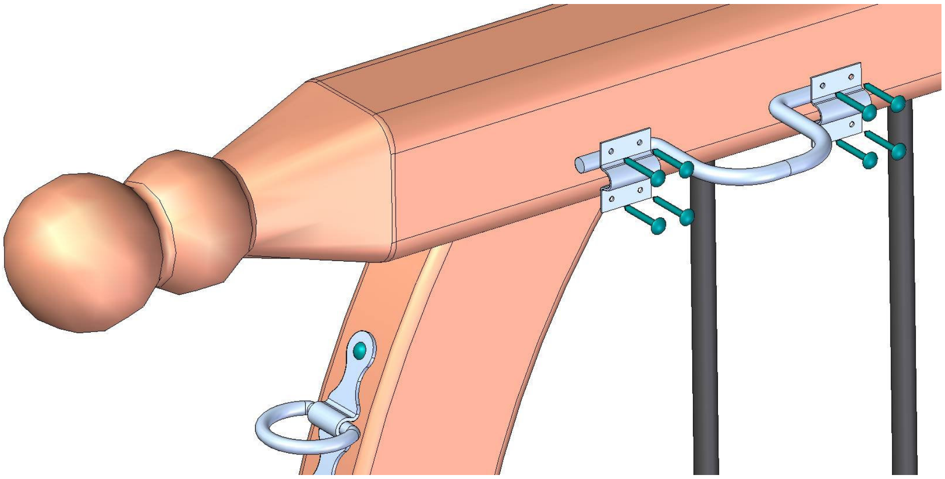


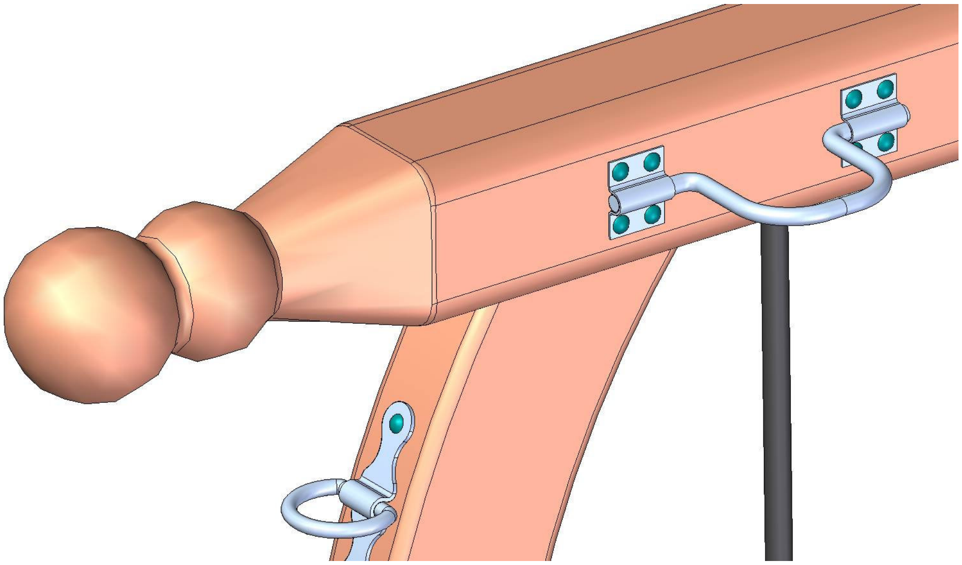


4. Join the Front Plate Joint (item 4.12) and Front Ring (item 4.13) with the subassembly made in the previous step by using nails (Tack D1,6x15mm – Item 4.09).

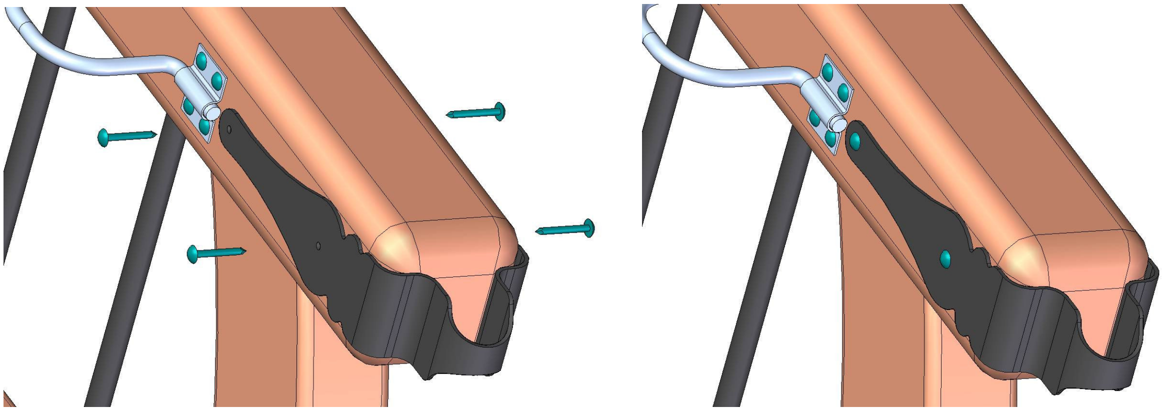


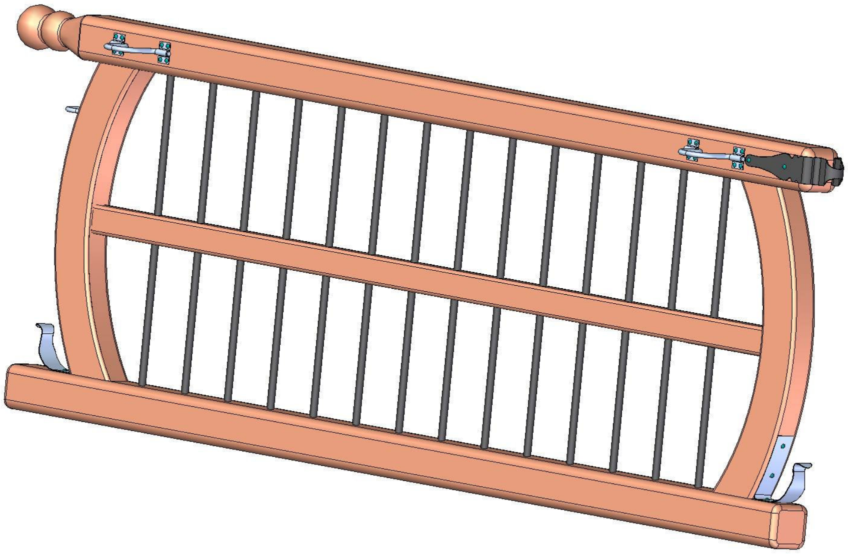
5. Join the Leg Hinge Plate (item 4.10) and the Leg Hinge Wire (items 4.11) with the subassembly made in the previous step by using nails (Tack D1,6x15mm – Item 4.09). Repeat the same procedure on the other end.





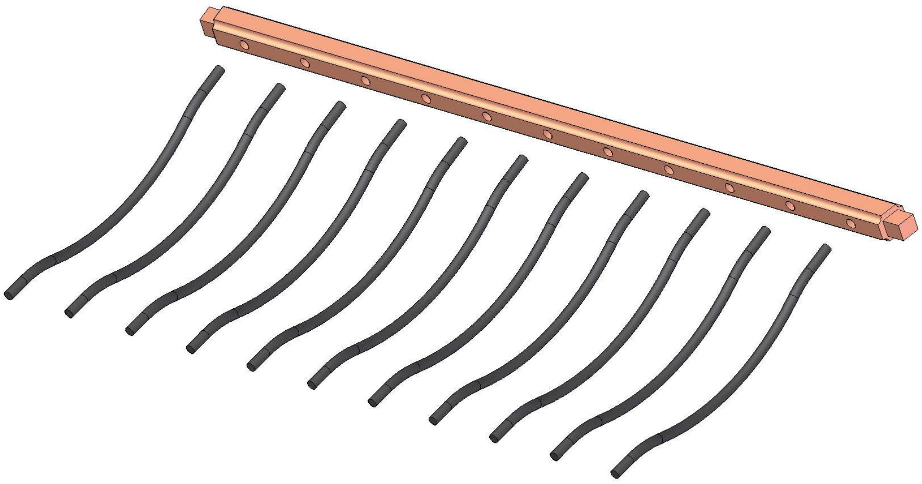
6. Join the Back Plate Joint (item 4.07) with the subassembly made in the previous step by using nails (Tack D1,6x15mm – Item 4.09).

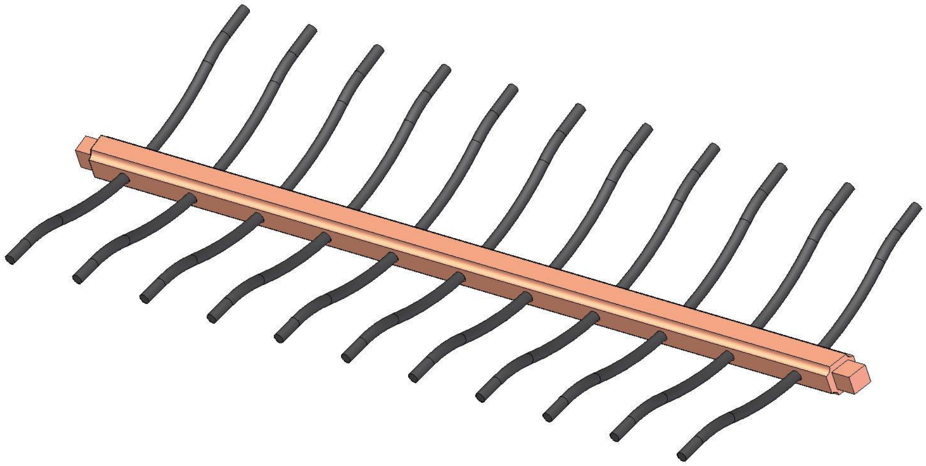




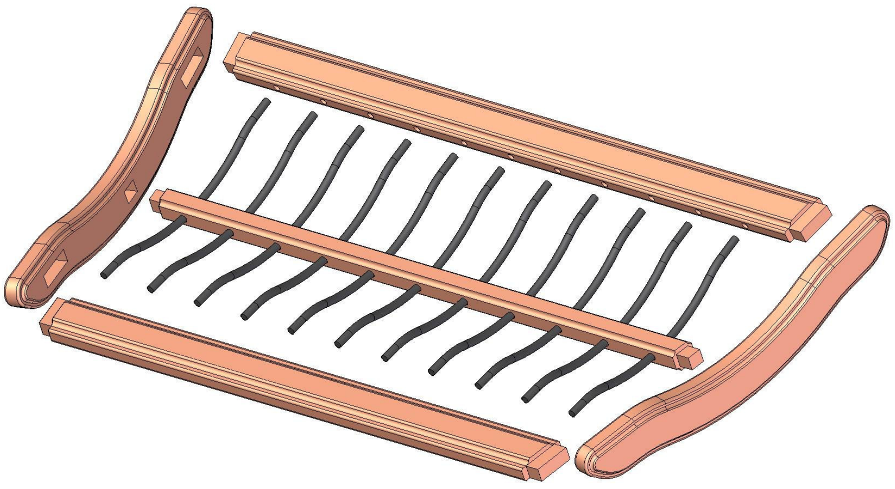
5. BACK SIDE

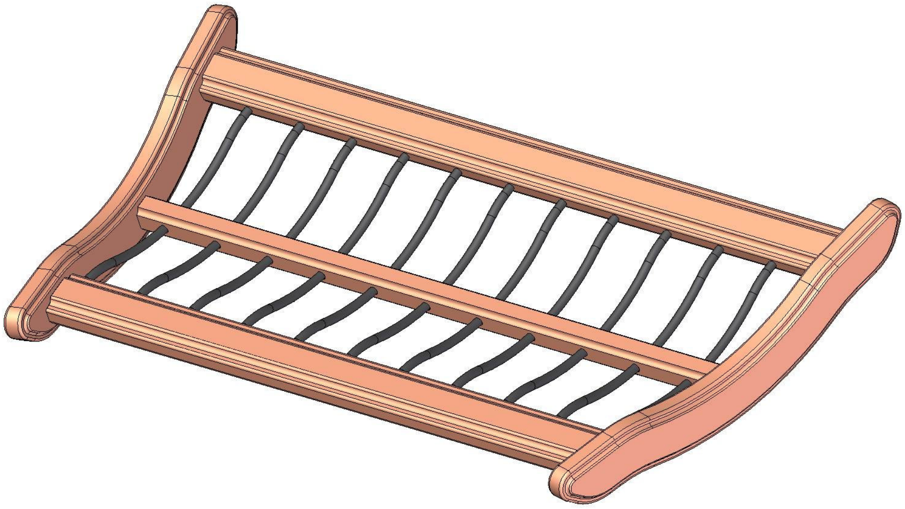
1. Pull the Wire Back Side (items 5.06) through the holes on the Middle Plank Back Side (item 5.04).



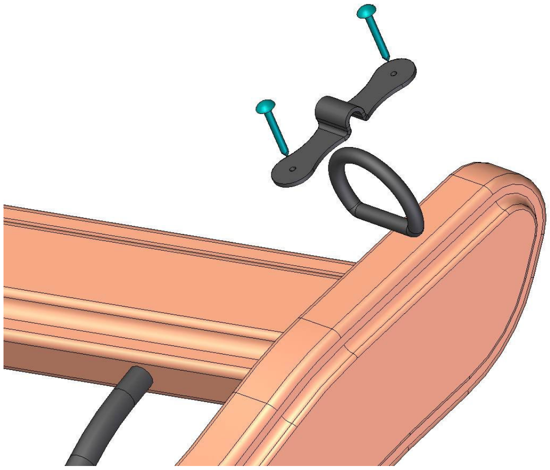


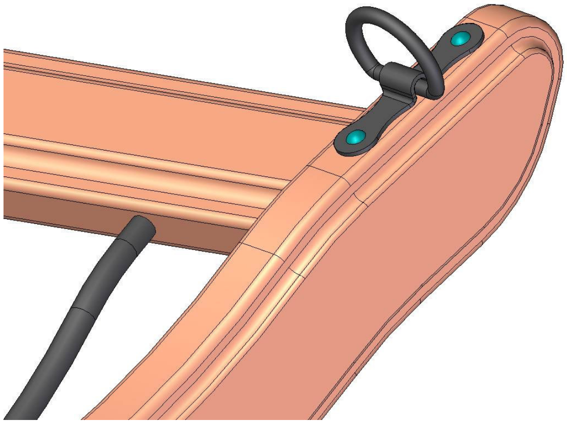
2. Attach the Short Plank Back Side (item 5.01), Longer Plank Back Side (item 5.02), Incline Plank (item 5.03) and Incline Plank Mirror (item 5.05) to the assembly made in the previous step by using glue. You should glue just the wooden joints.

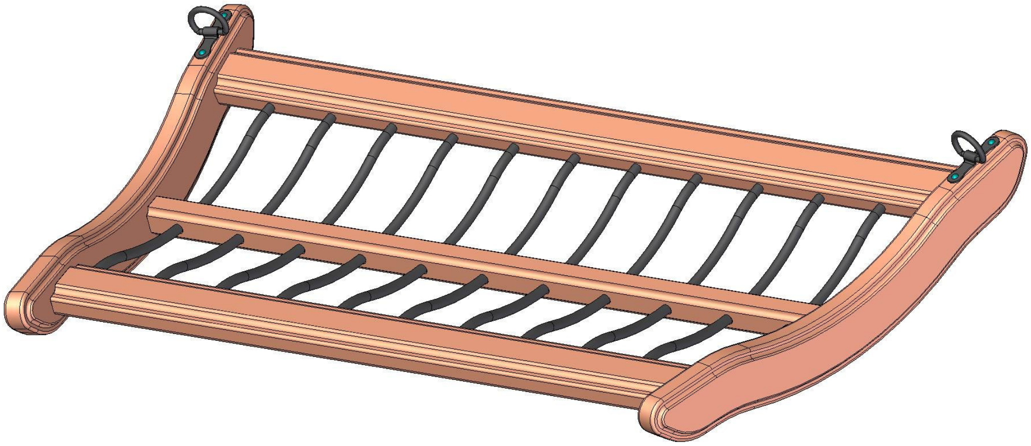




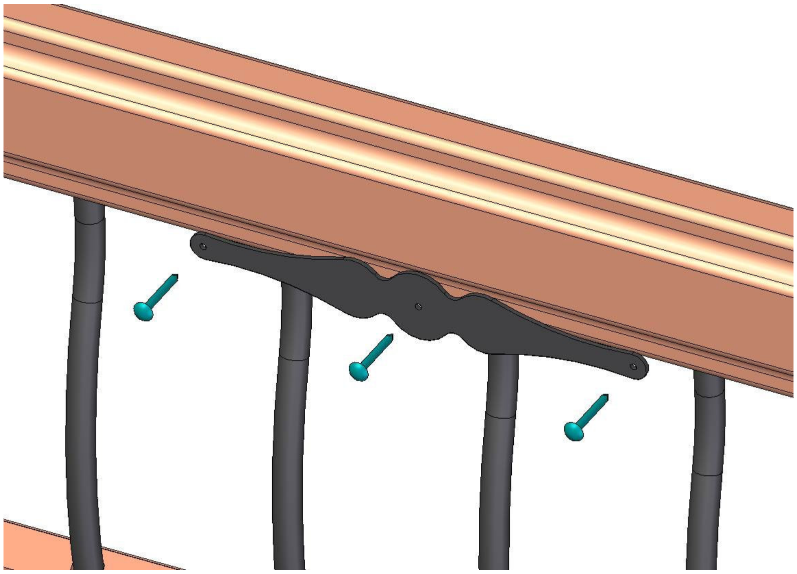
3. Join the Joint Back Side (item5.09) and the Front Ring (item 5.10) with the subassembly made in the previous step by using nails (Tack D1,6x15mm – Item 5.08). Repeat the same procedure on the other end.

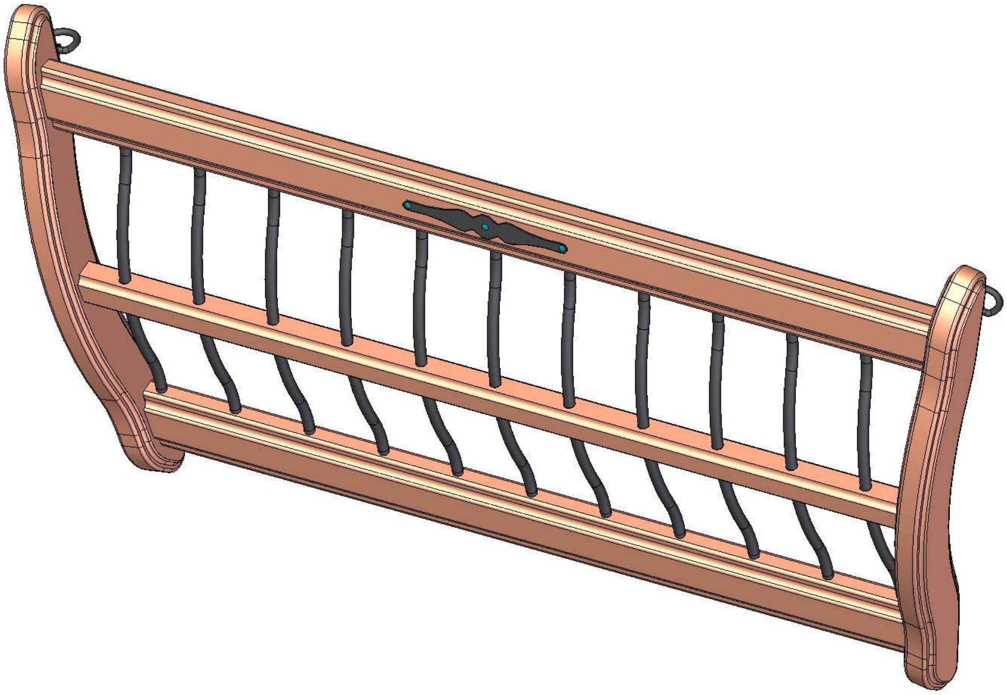






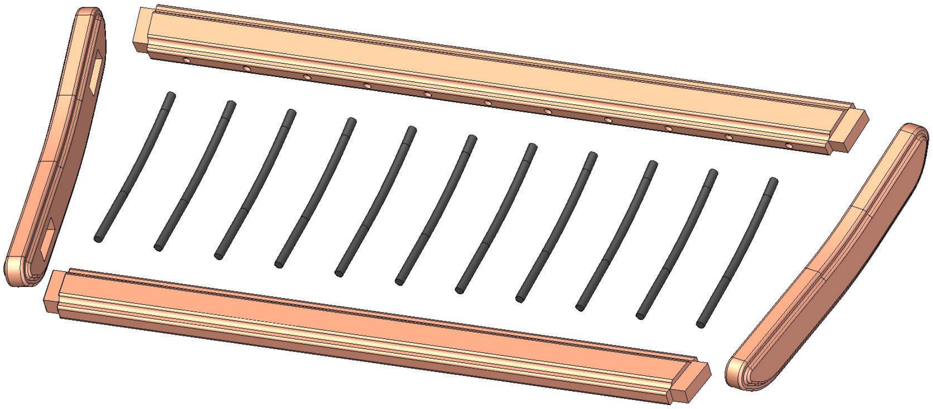
4. Fasten the Decoration (item 5.07) with the assembly made in the previous step by using nails (Tack D1,6x15mm – Item 5.08).

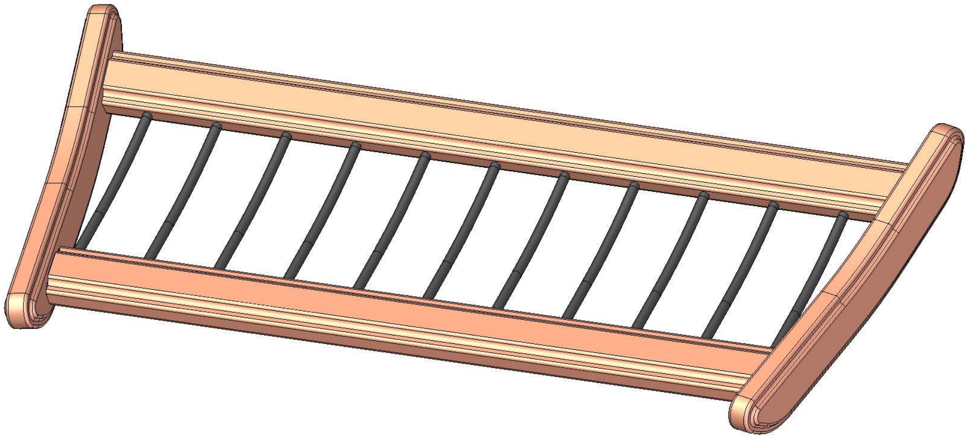




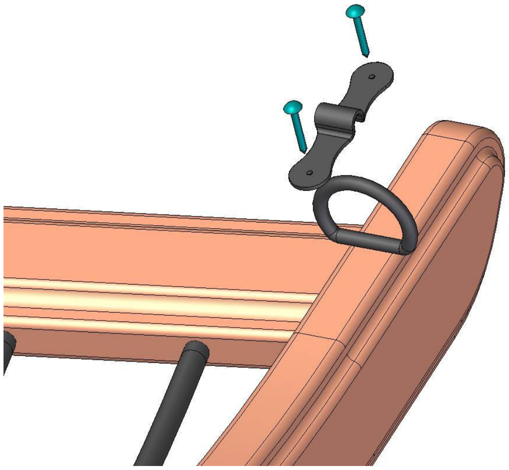
FRONT SIDE

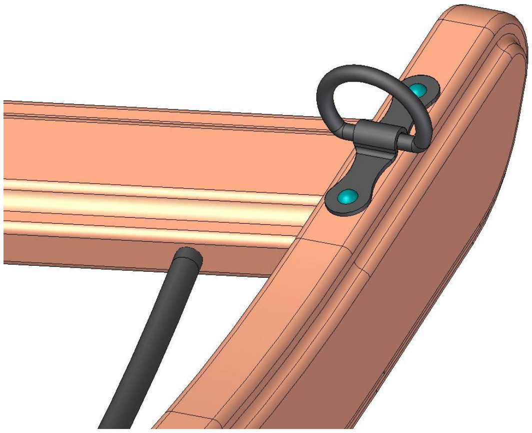
1. Join the Short Plank Back Side (item 6.01), Incline Plank Front (item 6.02), Incline Plank Front Mirror (item 6.03), Longer Plank Front Side (item 6.04) and Wire Front Side (item 6.05) with glue. You should glue just the wooden joints.

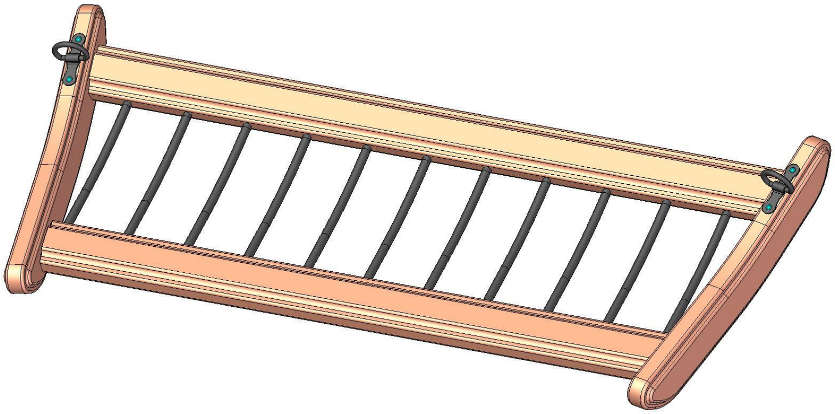




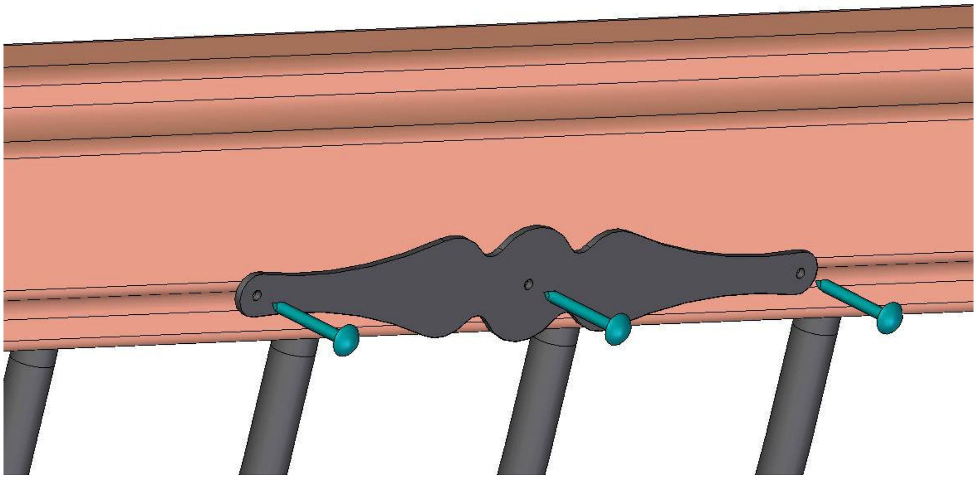
2. Fasten the Joint Back Side (item 6.08) and Front Ring (item 6.09) with the subassembly made in the previous step by using nails (Tack D1,6x15mm – Item 6.07). Repeat the same procedure on the other end.

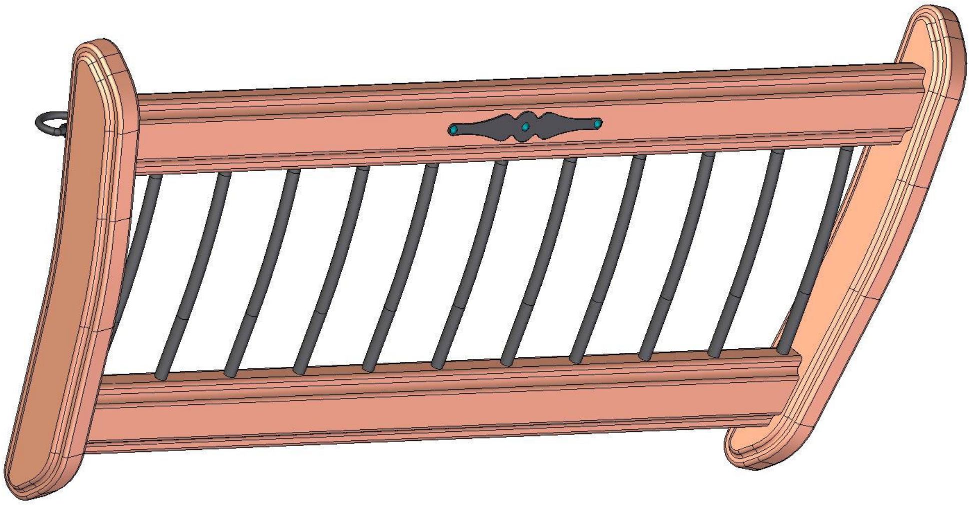






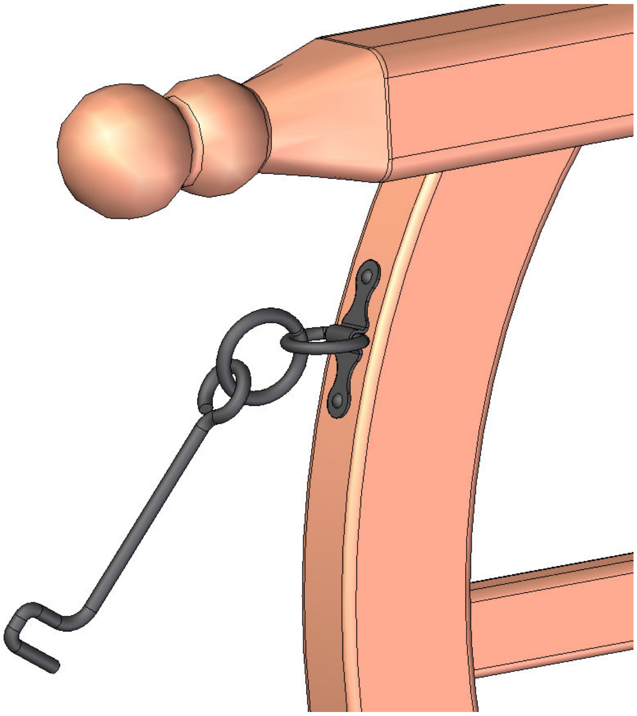
3. Fasten the Decoration (item 6.06) with the assembly made in the previous step by using nails (Tack D1,6x15mm – Item 6.09).

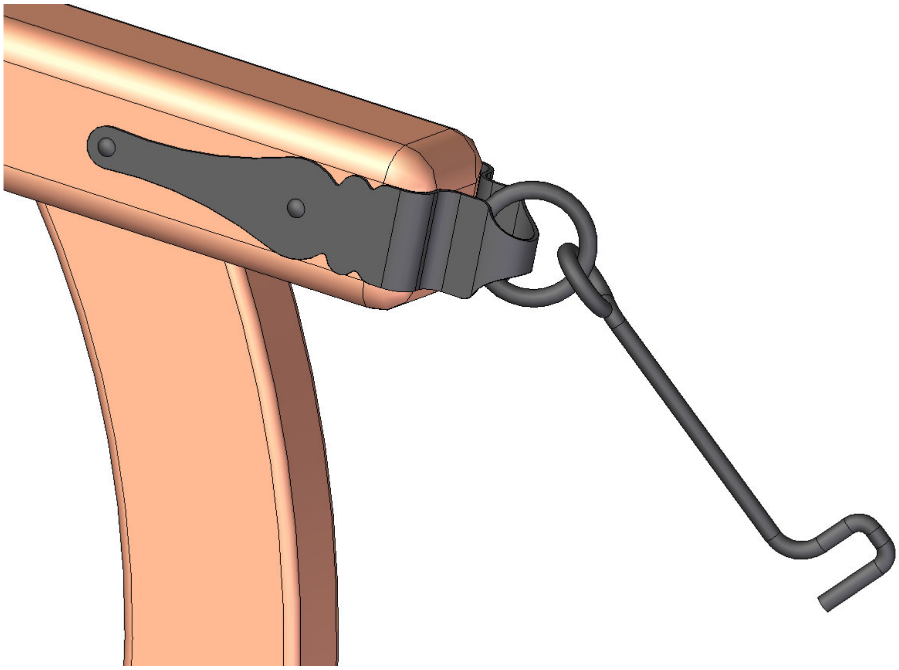




7. JOINT

Make the items as given in 2D documentation and mount them on the Front Ring (item 4.13) and Back Plate Joint (item 4.07).





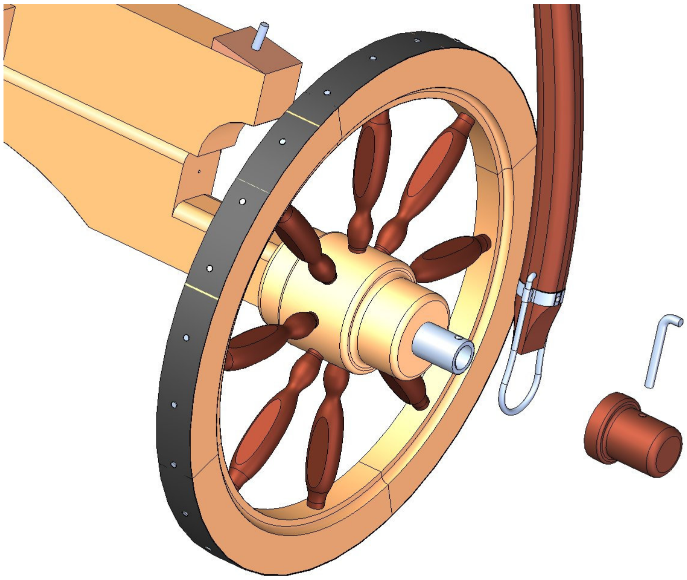
You will need four of these subassemblies.

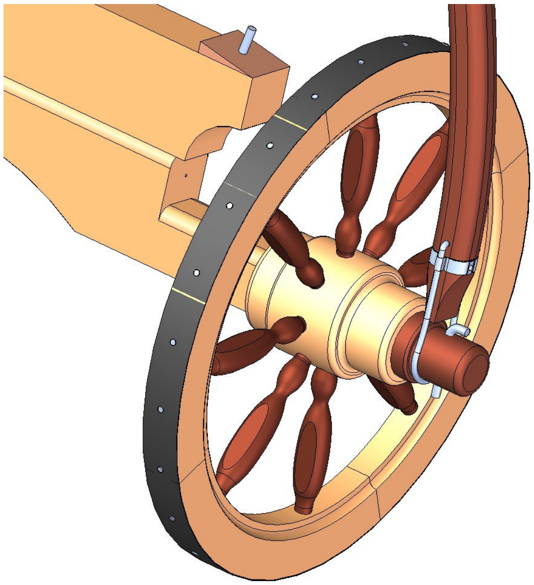
SIDE MIRROR

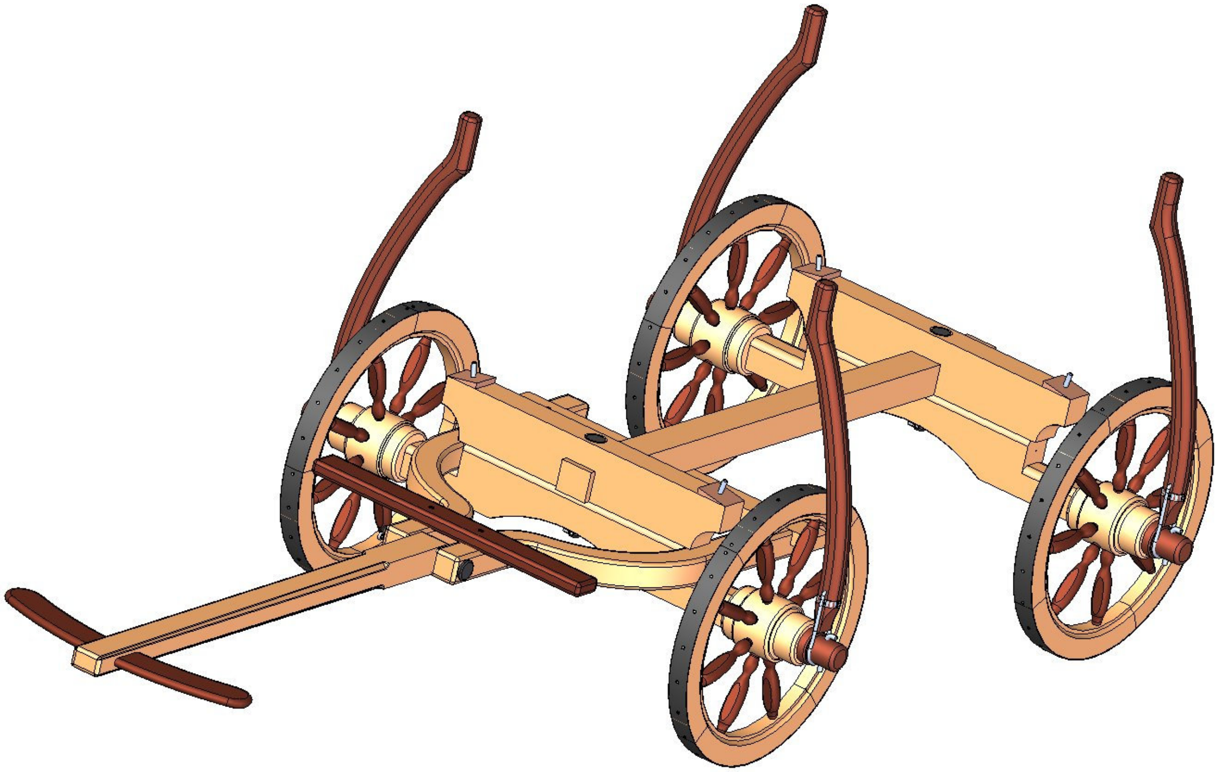
The procedure is the same as for the subassembly 4.SIDE subassembly.

FINAL MONTAGE OF SUBASSEMBLIES

1. Put the Wheel subassembly on the Tubular Axle (item 2.04 of the subassembly 2. Base). Pull the Axle Cover (item 2.05 of the subassembly 2. Base) to the Tubular Axle (item 2.04 from the subassembly 2 Base). Put the subassembly made in the step 8 (while you were assembling subassembly 2 Base) on the Axle Cover (item 2.05). Put the Pin D6mm (item 2.08 of the subassembly 2. Base) into the hole on the Axle Cover (item 2.05 of the subassembly 2. Base).

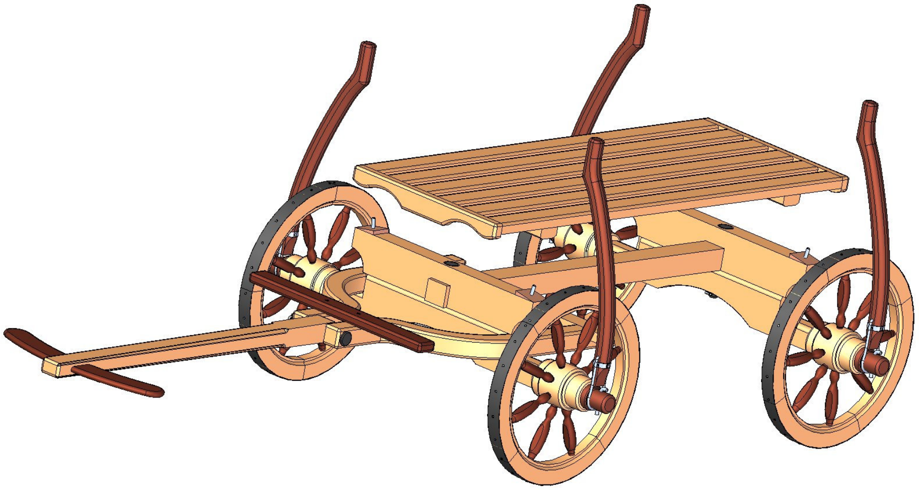


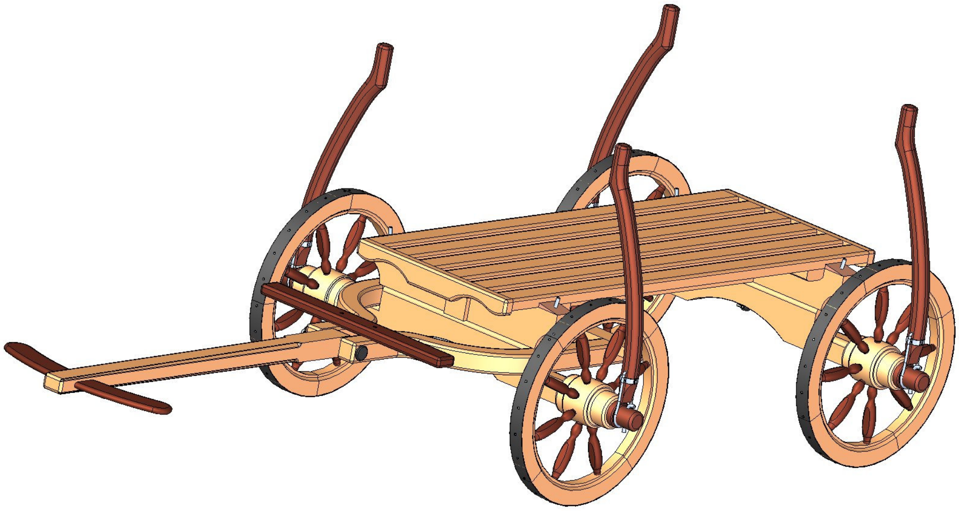




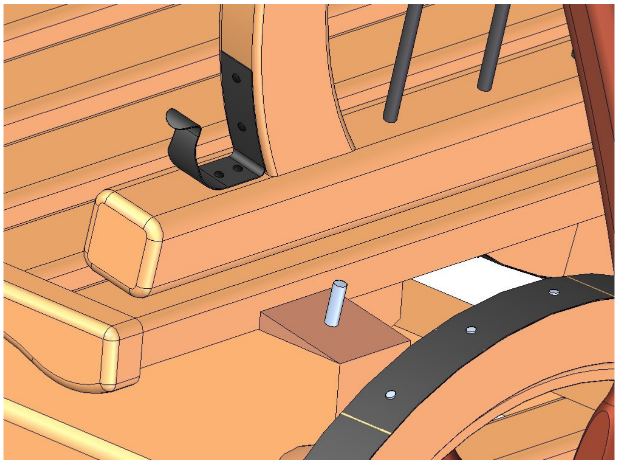
Repeat this operation on the remaining three places.

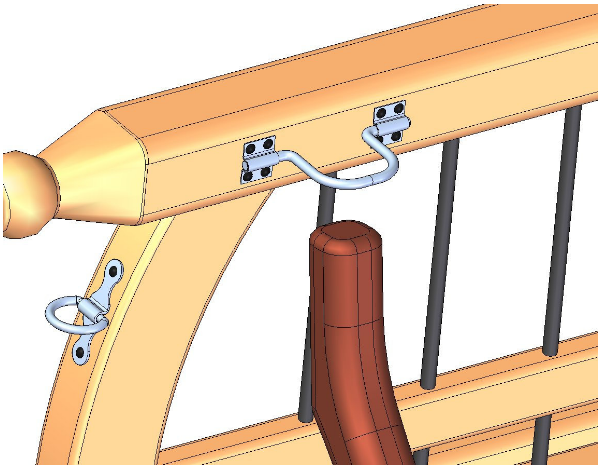
2. Set the Bottom (subassembly 3) on the Base (subassembly 2).

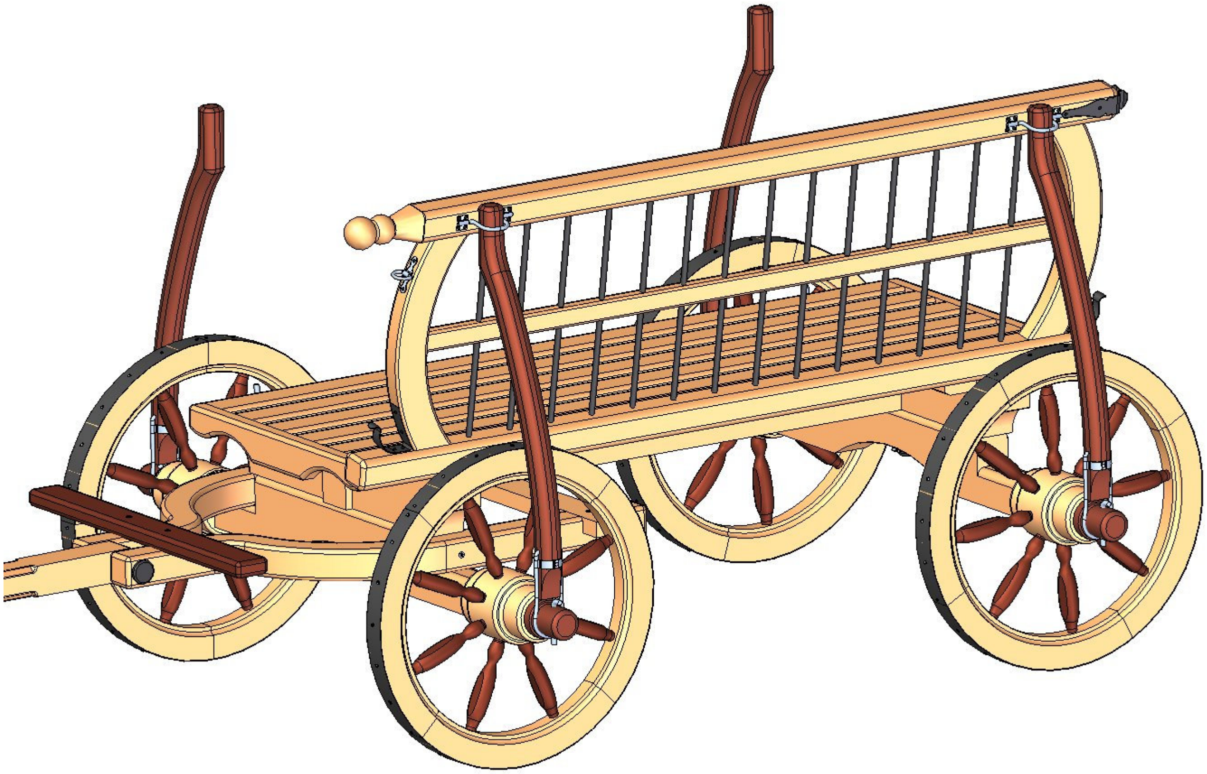


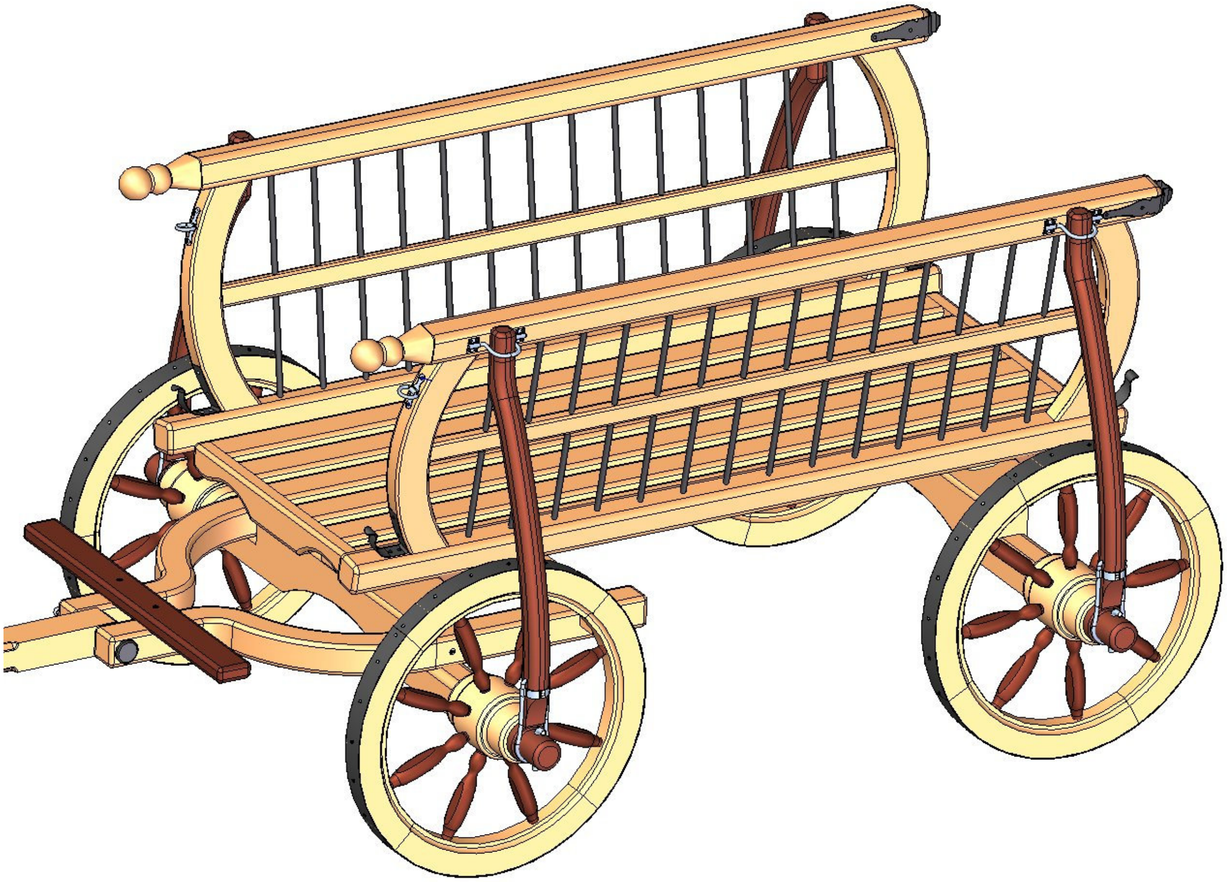


3. Mount the Side (subassembly 4) and Side Mirror (subassembly 8) on the assembly made in the previous step. Pay special attention to Side Support (item 2.12 of the subassembly 2. Side) that should fit into the holes on the Side (subassembly 4) and the Side Mirror (subassembly 8).

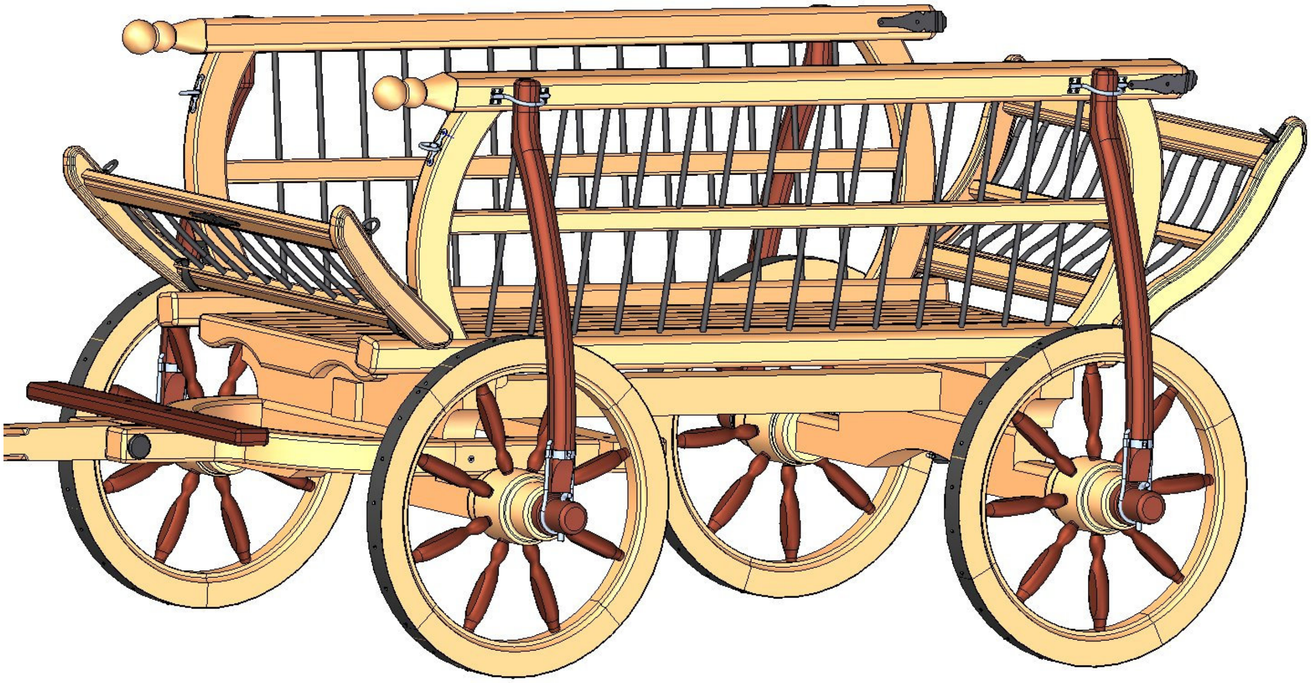








4. Set the Back Side (subassembly 5) and Front Side (subassembly 6) on their places.



5. Hook the Back Side (subassembly 5) and Front Side (subassembly 6) to the construction of Carriage with Joint (subassemblies 7).